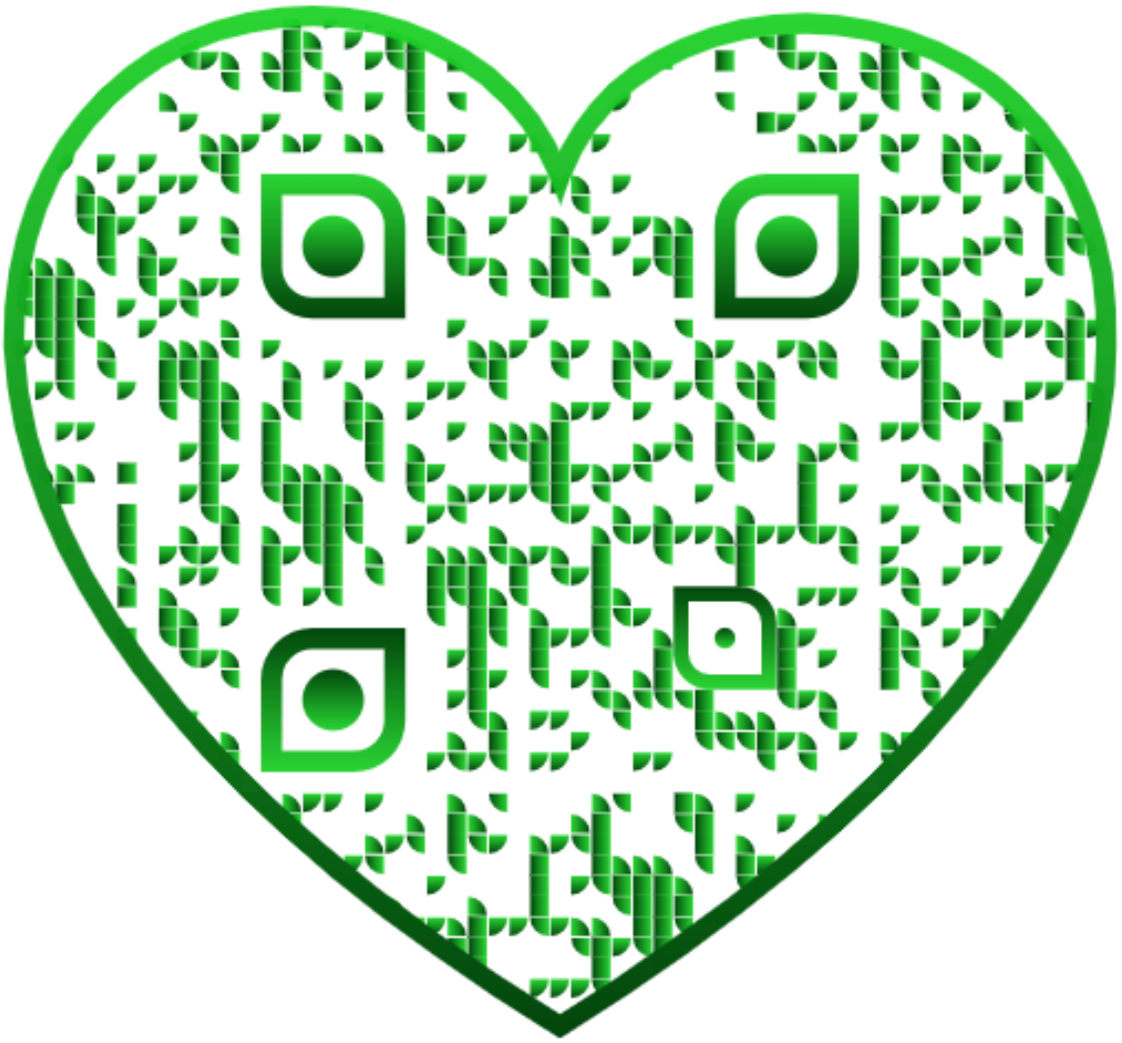
مفاجئة الموسم

كل ما هو موجود في هذا الملف منسوخ من ملفات الدكتور حمزة لكن الفكرة التي تميزنا بها هي عرض السلايدات بطريقة مرتبة جدا ؛ بكلمات أخرى كلما يحتاجه الطالب لوضعة في ورقة الامتحان ليضمن الفل مارك بالإضافة لوجود ملف آخر يوجد فيه السلايدات بدون بيانات ليختبر الطالب نفسة بنفسة. وفي الأخير لا تنسونا من خالص دعائكم

مراجعة سلايدات معمل الباثو للدكتور حمزة الضياني (اسم الشريحة + مميزاتها)

عمل الطالب:-

عبدالفتاح يحيى علي الطلقي



Cell injury

Slide Name:

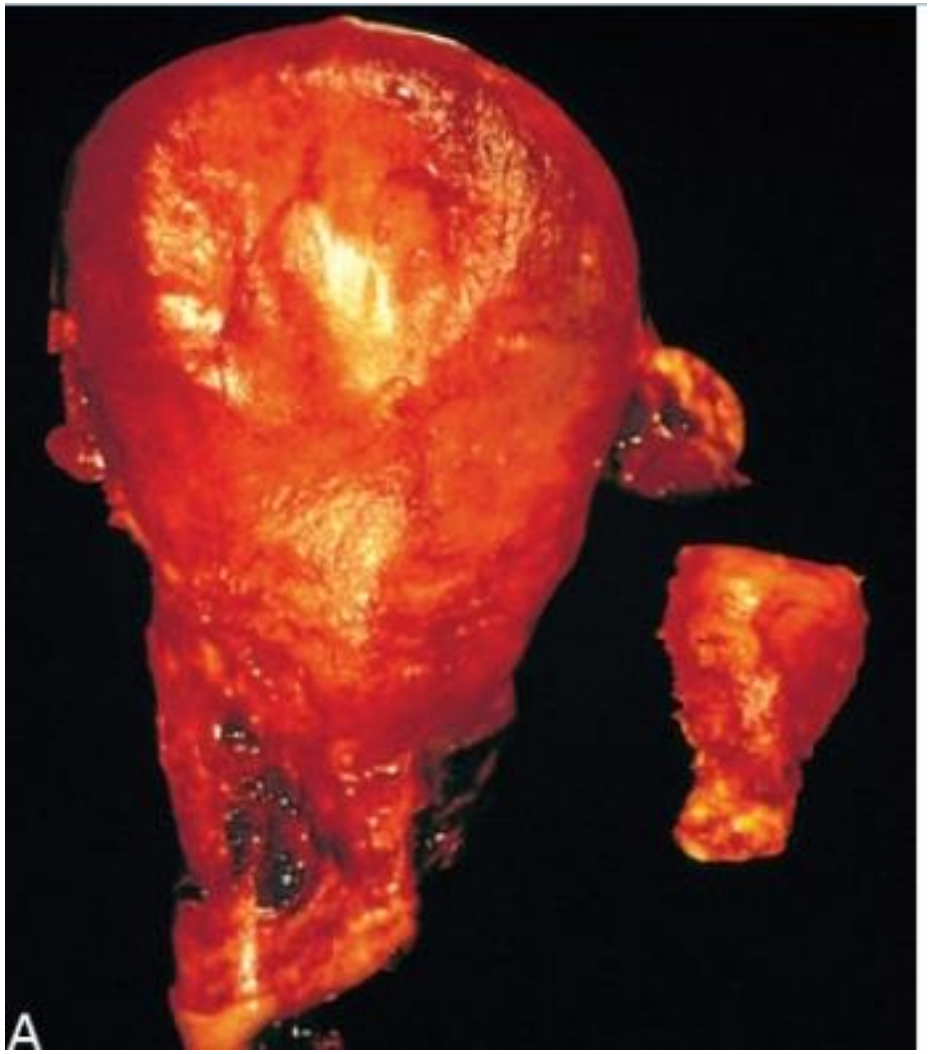
physiologic Hypertrophy: Gross

Features of slide:

Physiologic hypertrophy of the uterus during pregnancy.

1) In the right: Gross appearance of a normal uterus

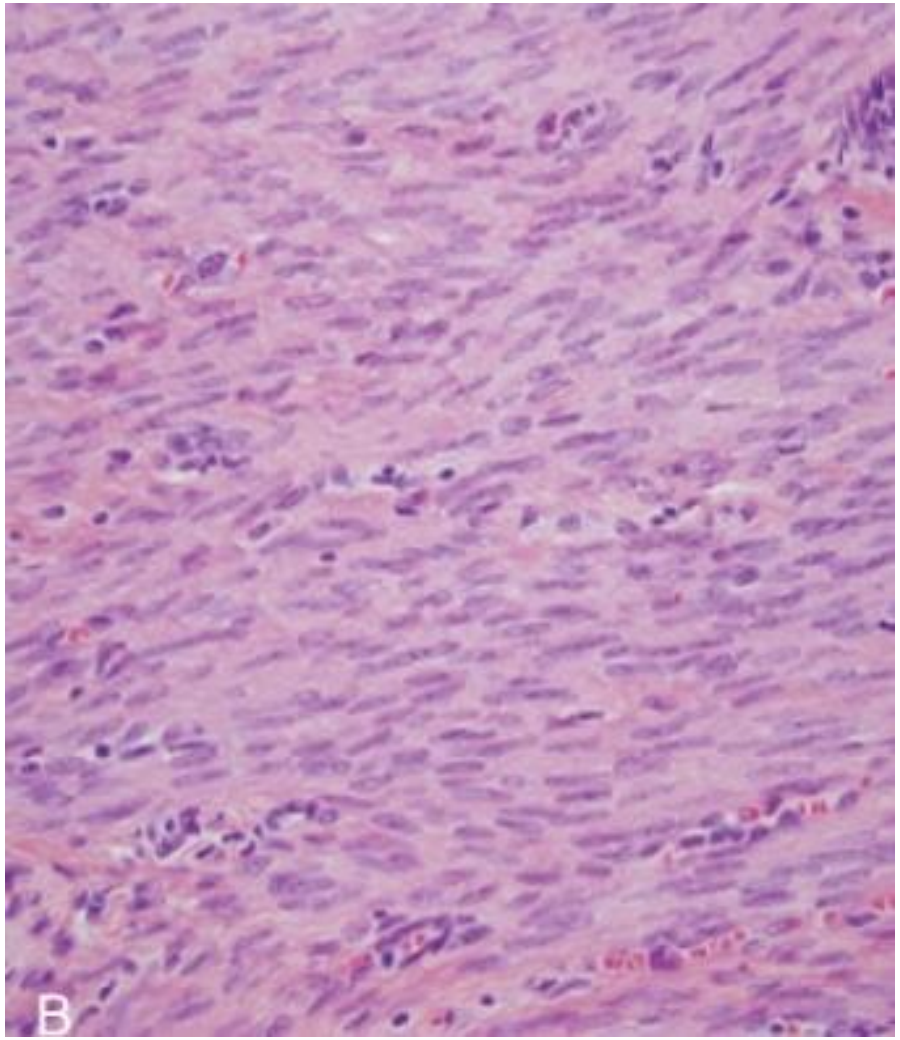
2) In the left: a gravid uterus that was removed for postpartum bleeding.



Slide Name:
Normal uterus: Microscopic

Features of slide:

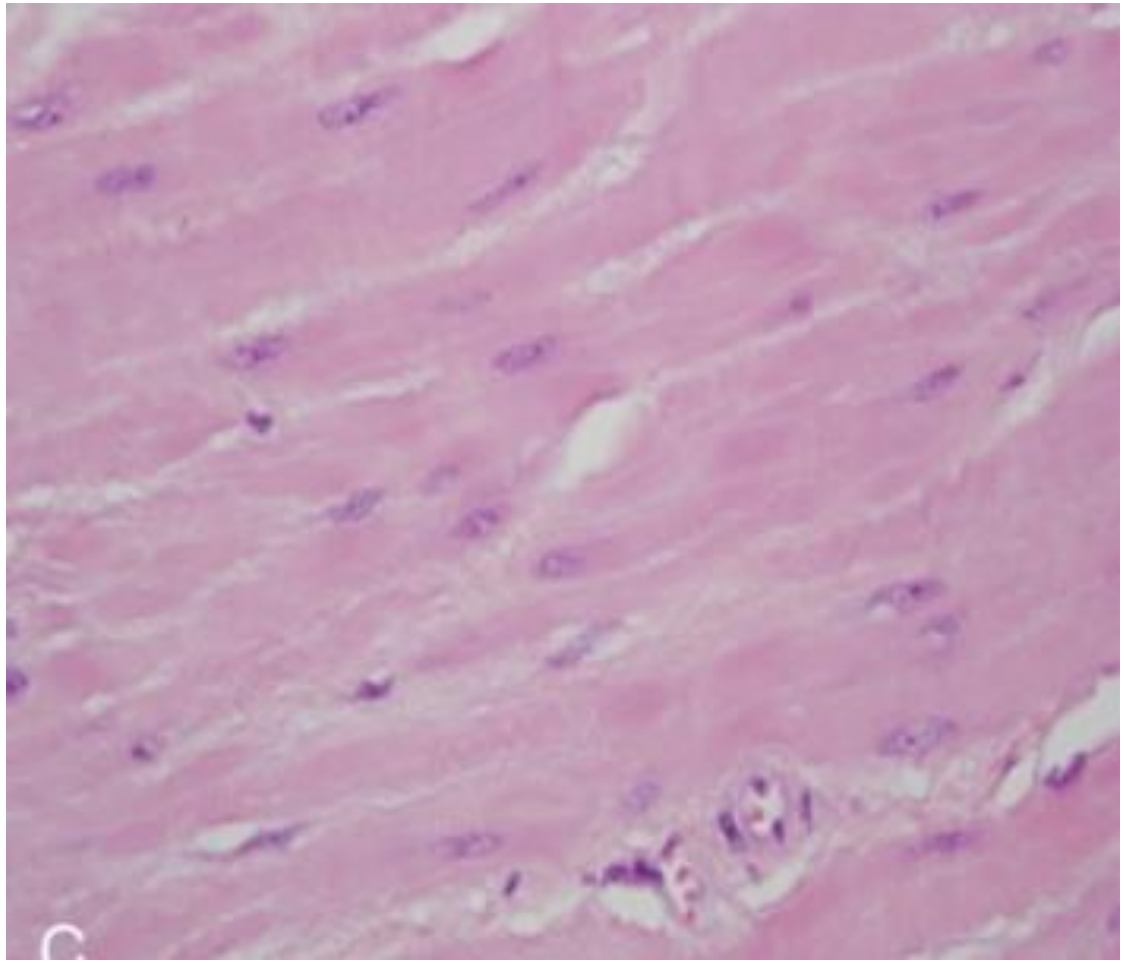
Small spindle-shaped uterine smooth muscle cells from a normal uterus.



Slide Name:
physiologic Hypertrophy: Microscopic

Features of slide:

Large, plump hypertrophied smooth muscle cells from a gravid uterus.

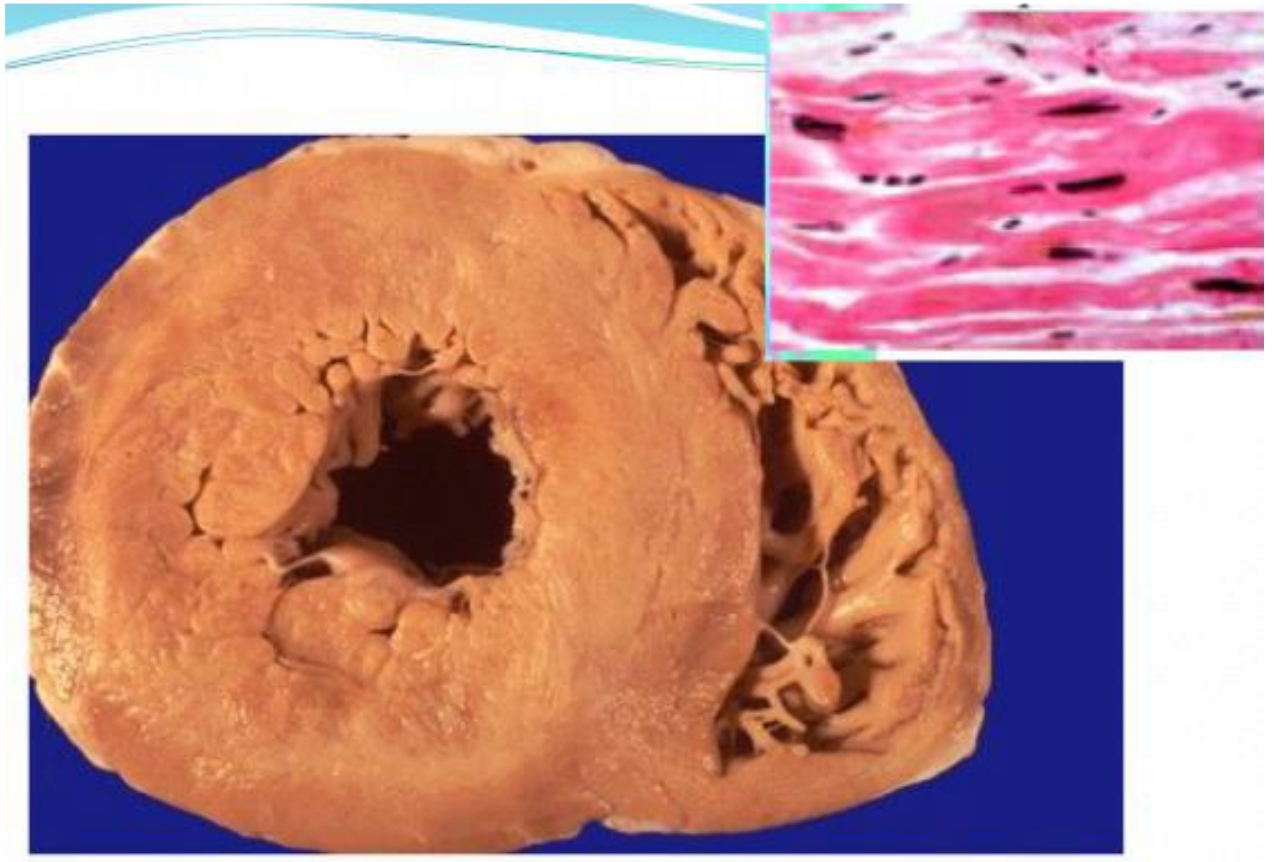


Slide Name:
pathologic Hypertrophy: Gross & Microscopic

Features of slide:

Hypertrophy of the heart:

- **Grossly:** Thickening of the cardiac wall.
- **Microscopically:** Enlargement of the cell.

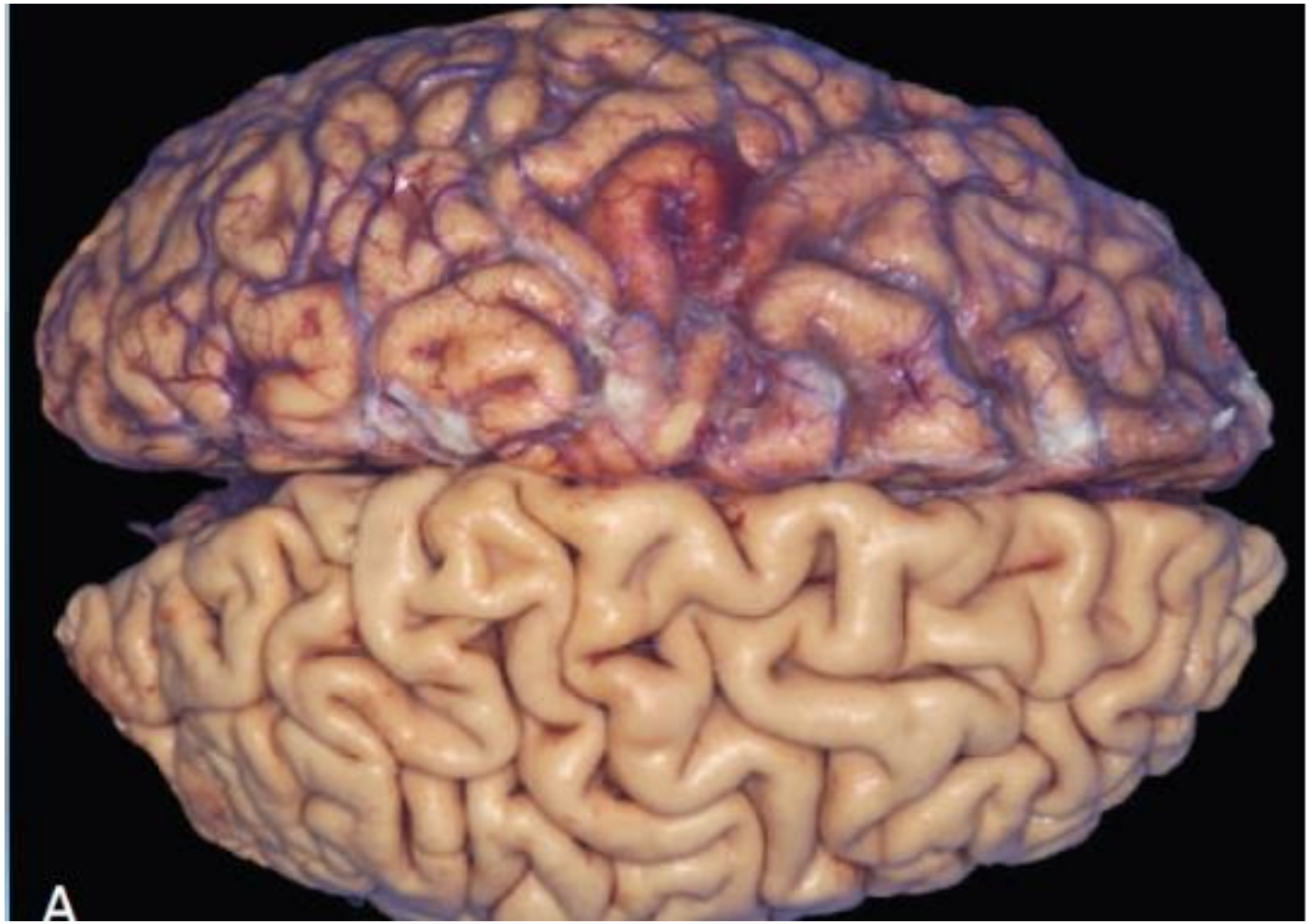


Slide Name:

Normal Brain: Gross

Features of slide:

Normal brain of a young adult.



Slide Name:
Atrophy of brain: Gross

Features of slide:

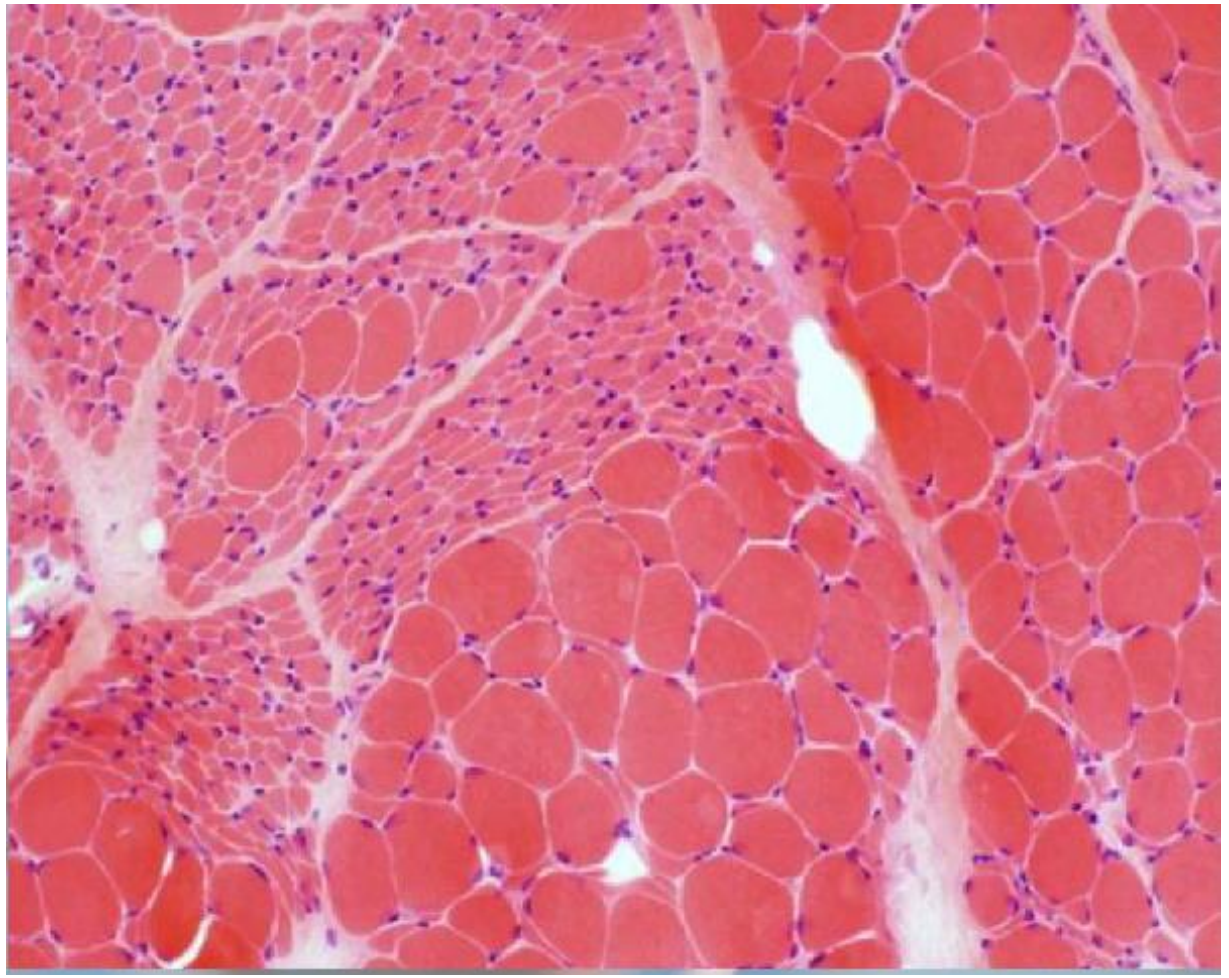
Atrophy of the brain show:

1. Loss of brain substance.
2. Narrowing of gyri.
3. Widening of sulci.

Slide Name:
Atrophy of skeletal muscle fibers: Microscopic

Features of slide:

1. Some of skeletal muscle fibers show atrophy
2. The number of cell fibers are the same but the size of some fibers are reduced.



Slide Name:
Metaplasia of esophagus: Gross

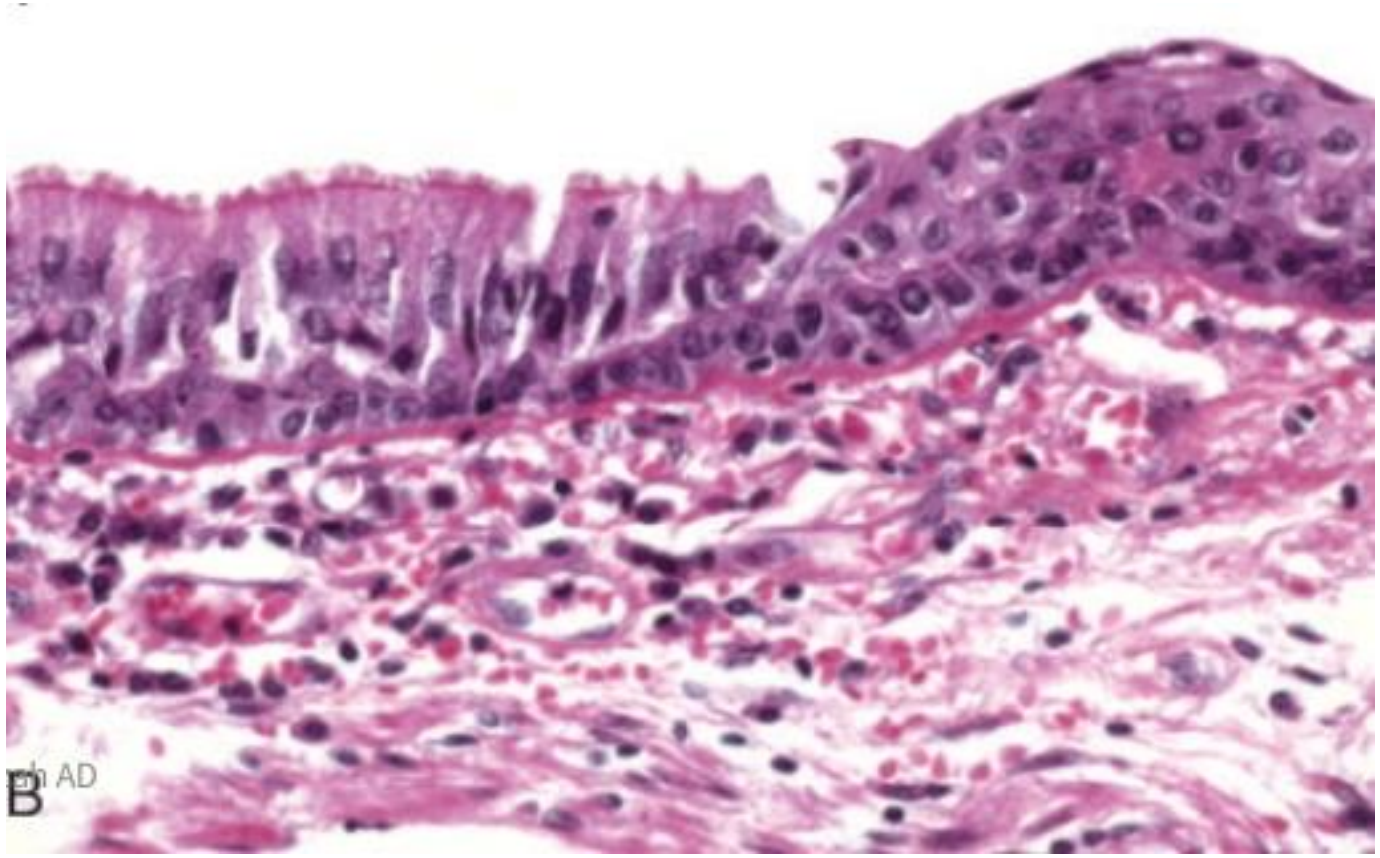
Feature of slide:

Endoscopic image of Barrett's esophagus shows change in color of esophagus due to prolonged exposure to gastric acid.

Slide Name:
Metaplasia of bronchus: Microscopic

Features of slide:

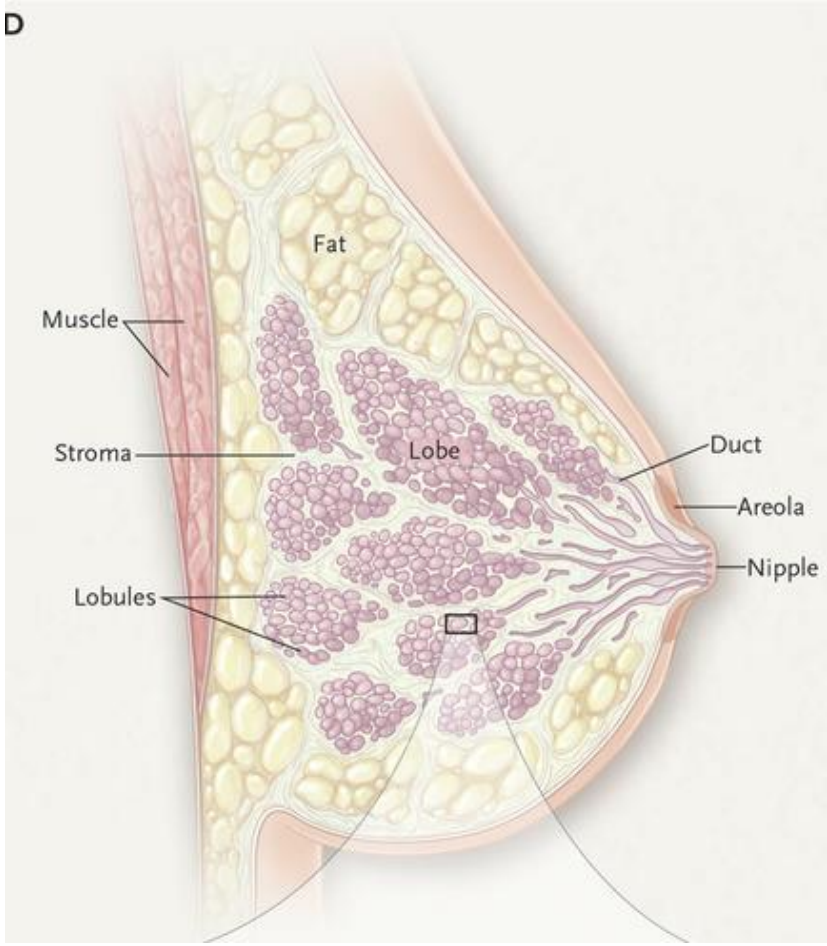
Metaplasia of normal psedocolumnar epithelium to squamous epithelium in a bronchus.



Slide Name:
Hyperplasia of breast gland: Gross

Features of slide:

Increased breast gland numbers in response to hormones during pregnancy and lactation.



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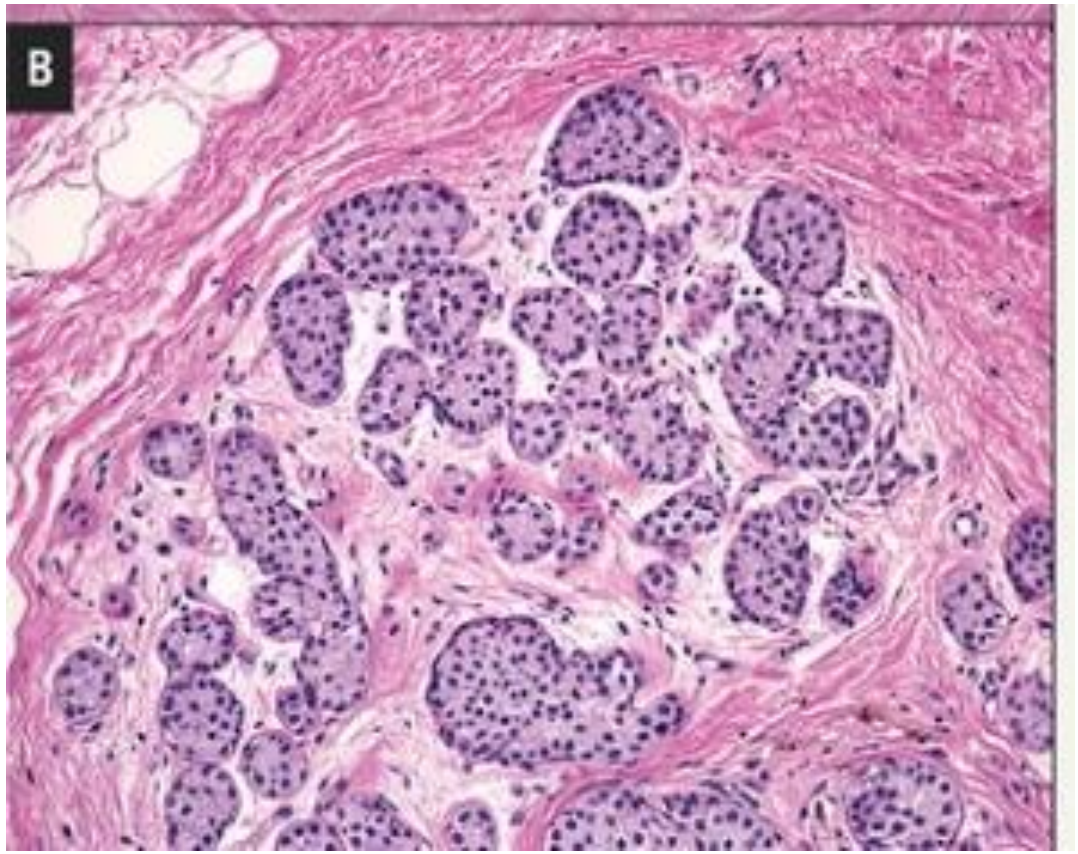

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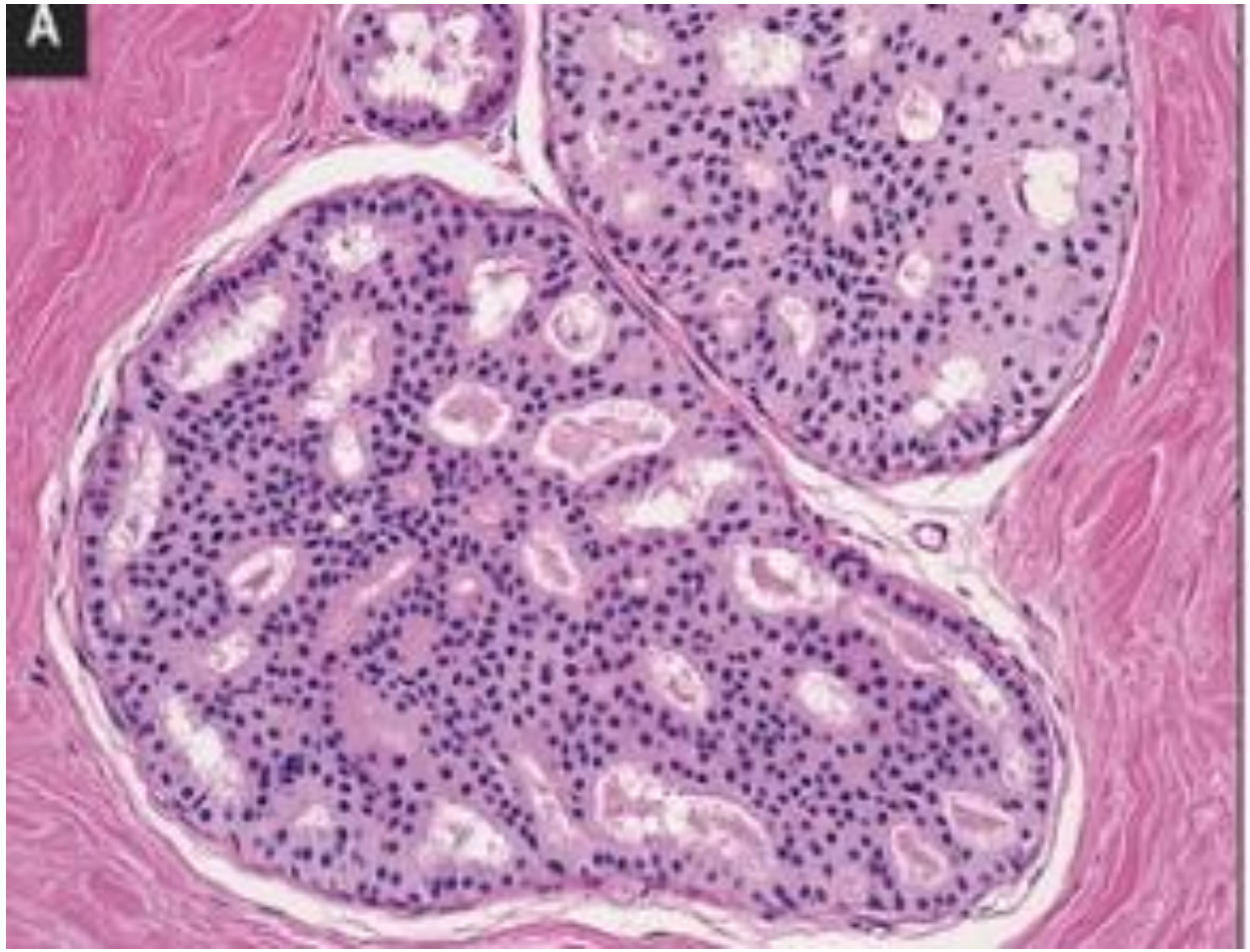

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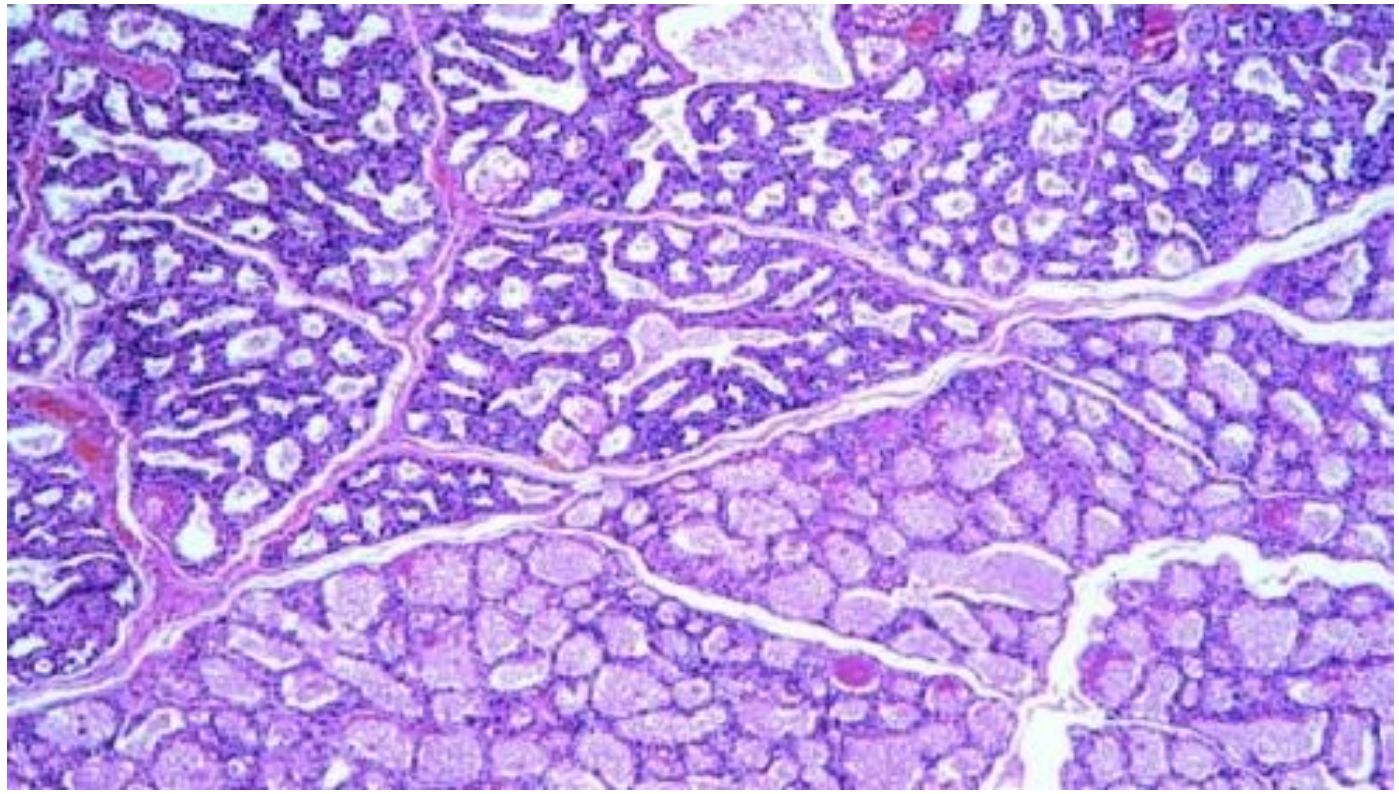
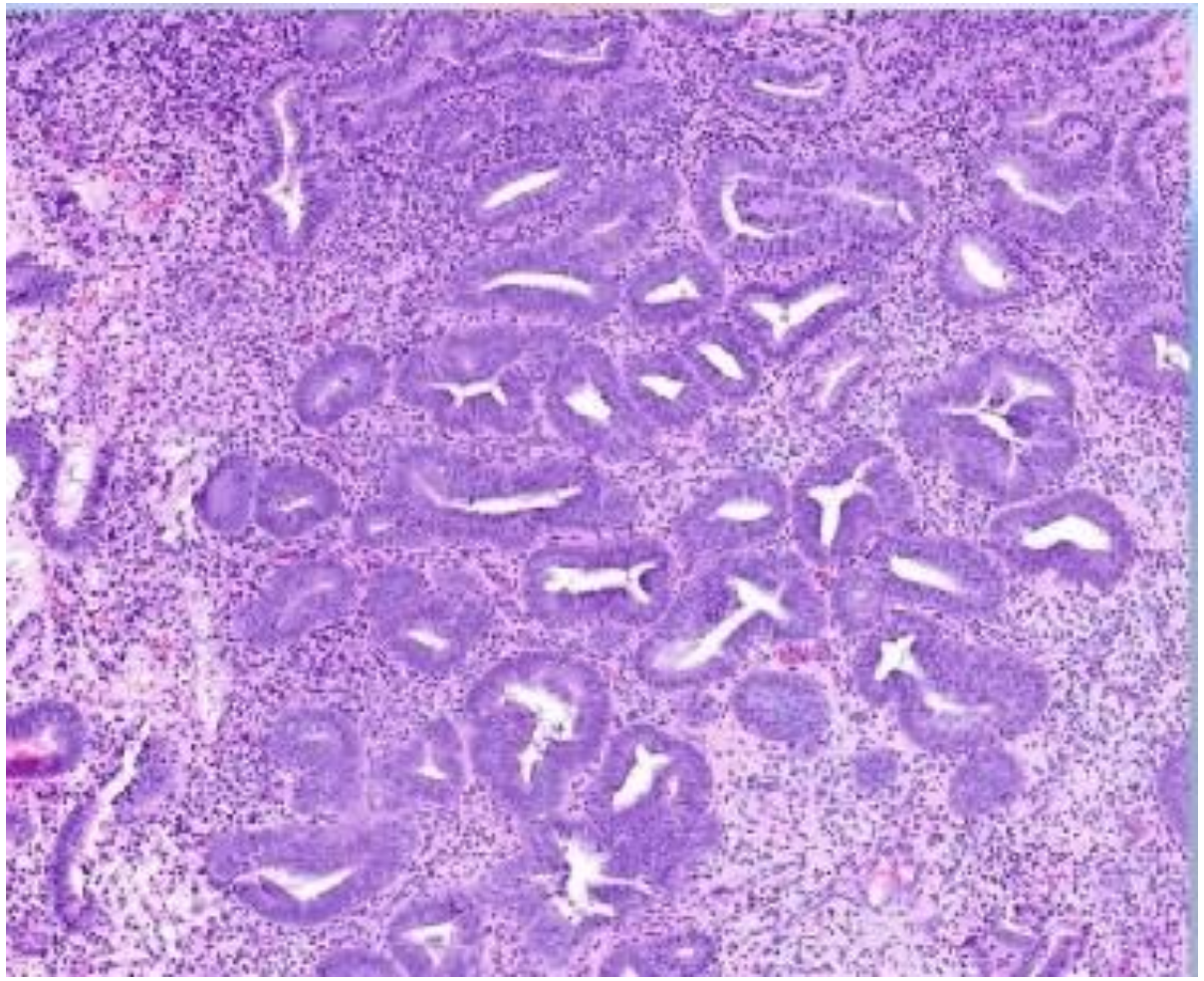


Slide Name:
Hyperplasia: Microscopic

Features of slide:

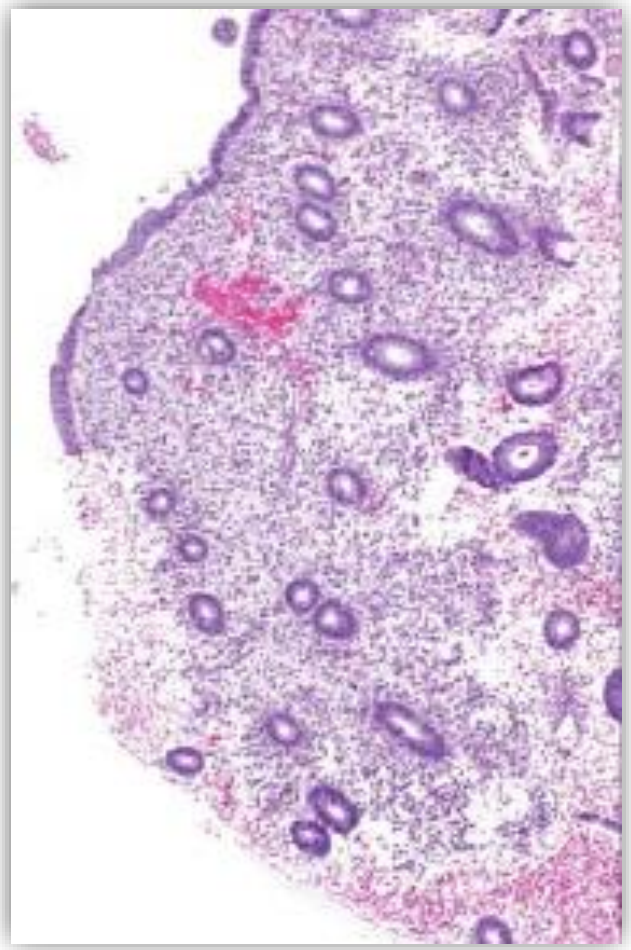
No details!!



Slide Name:
Hyperplasia: Microscopic

Features of slide:

No details!!



Slide Name:
Hyperplasia of the uterus: Gross

Features of slide:

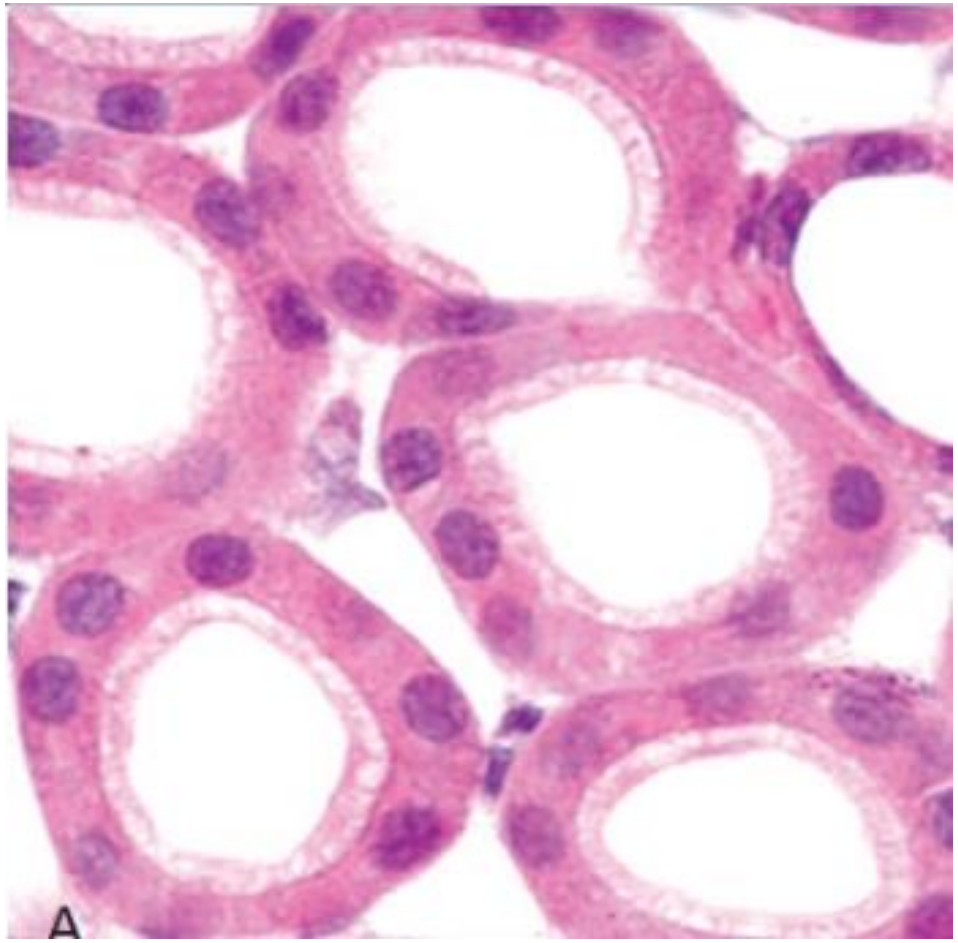
Enlargement of the uterus with increased thickness of the wall

(includes both hyperplasia and hypertrophy)

Slide Name:
Normal kidney tubules: Microscopic

Features of slide:

Normal kidney tubules with viable epithelial cells.

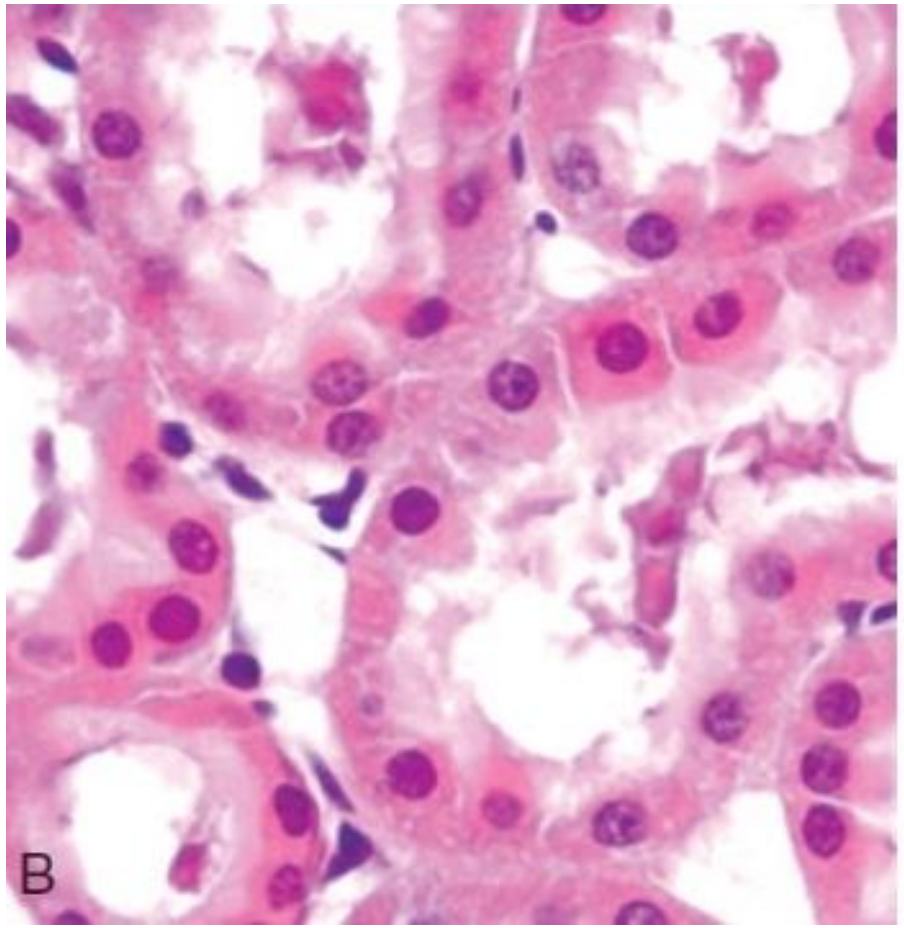


Slide Name:
Cell Injury of kidney tubules: Microscopic

Features of slide:

Early (reversible) ischemic injury showing:

1. **Surface blebs.**
2. **Increased eosinophilia of cytoplasm.**
3. **Swilling of cells.**

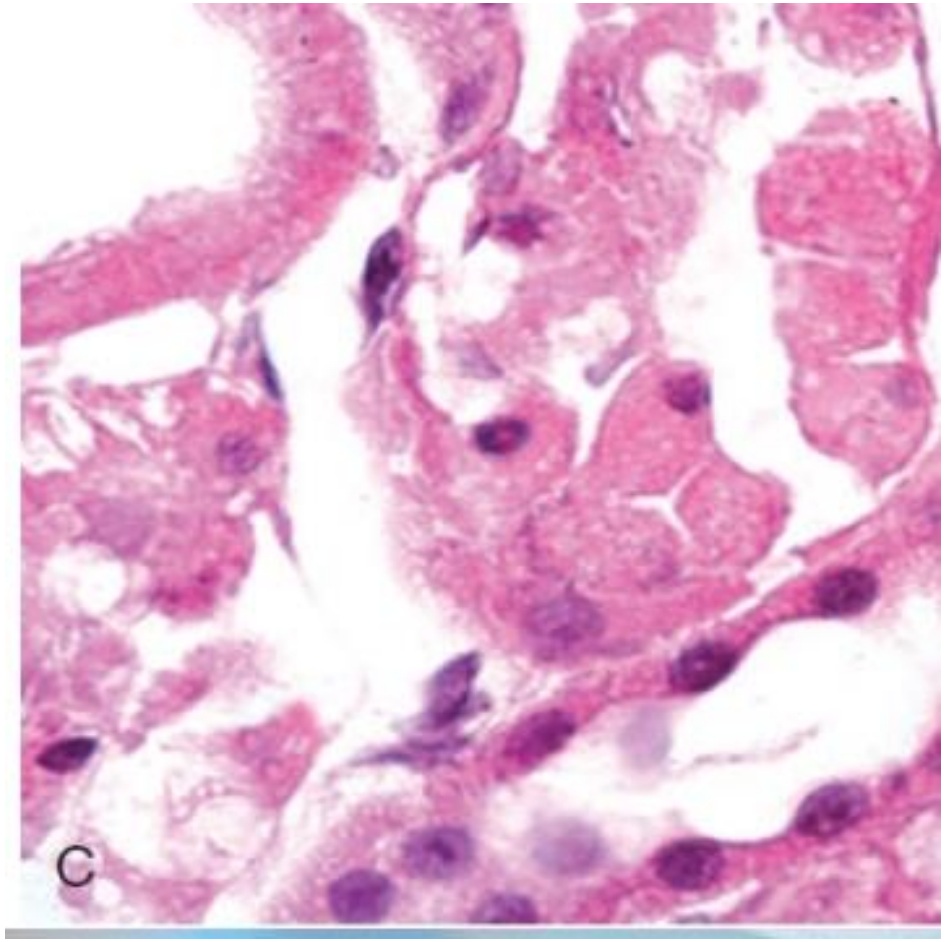


Slide Name:
Cell Injury of kidney tubules: Microscopic

Features of slide:

Necrotic (irreversible) injury of epithelial cells with:

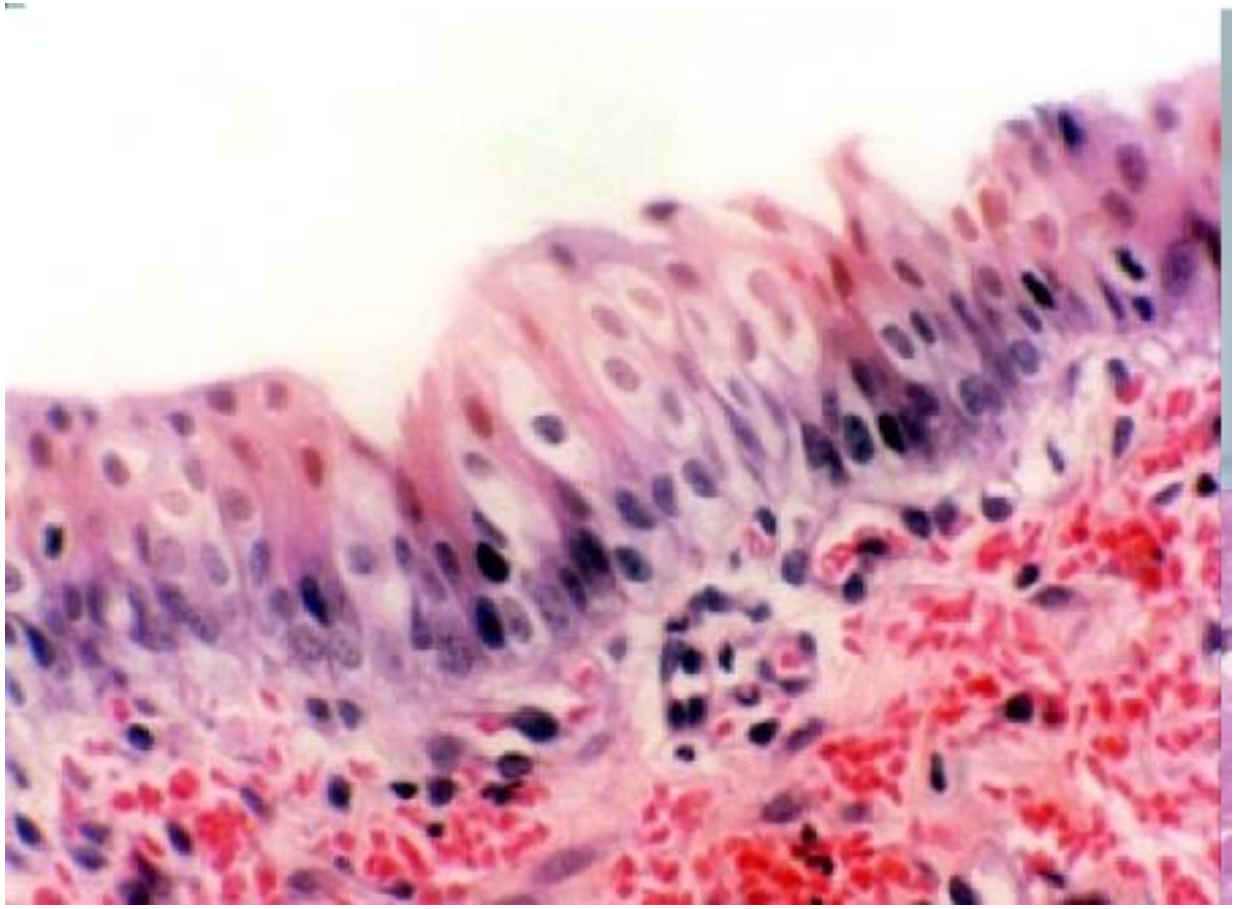
1. Loss of nuclei.
2. Fragmentation of cells.
3. Leakage of contents.



Slide Name:
Cell Swelling (Reversible Cell Injury): Microscopic

Features of slide:

Enlarged clear cells with pale staining due to fluid accumulation.



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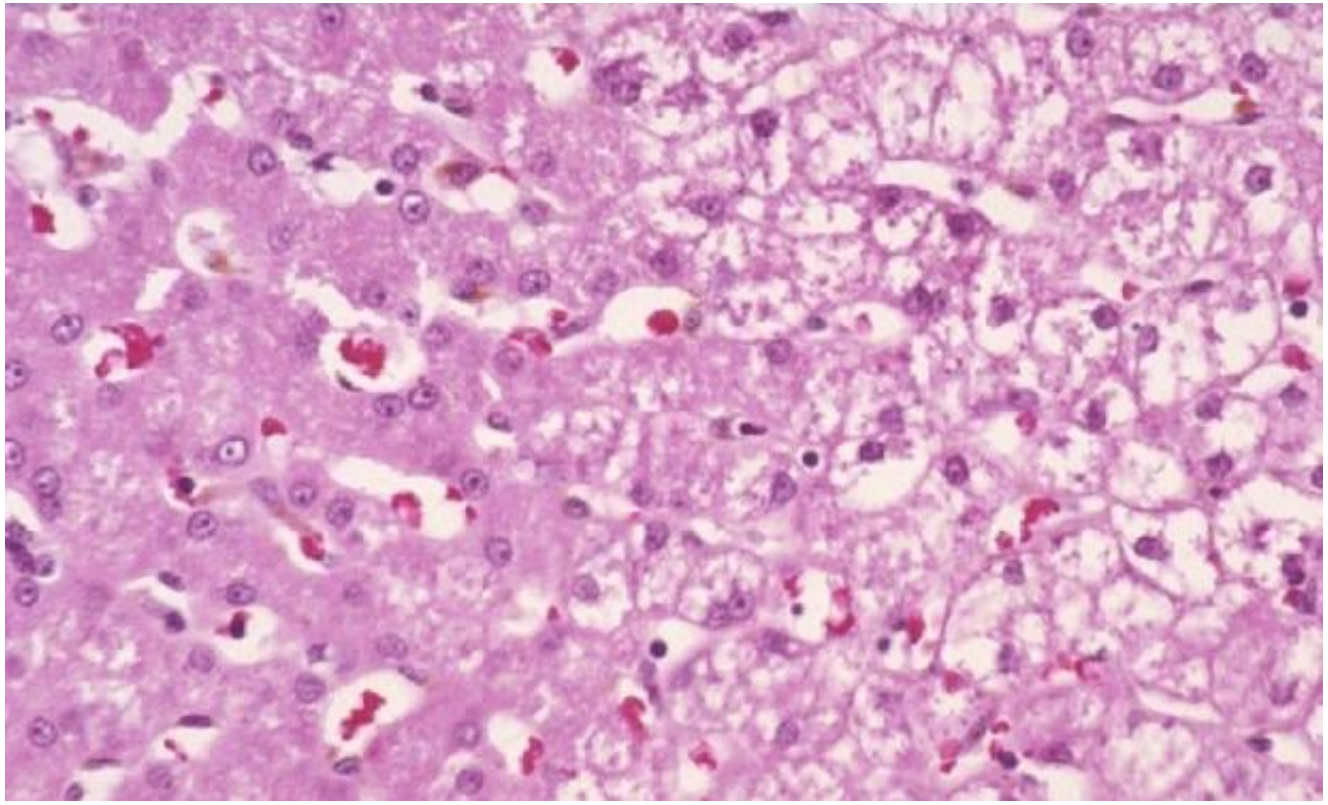
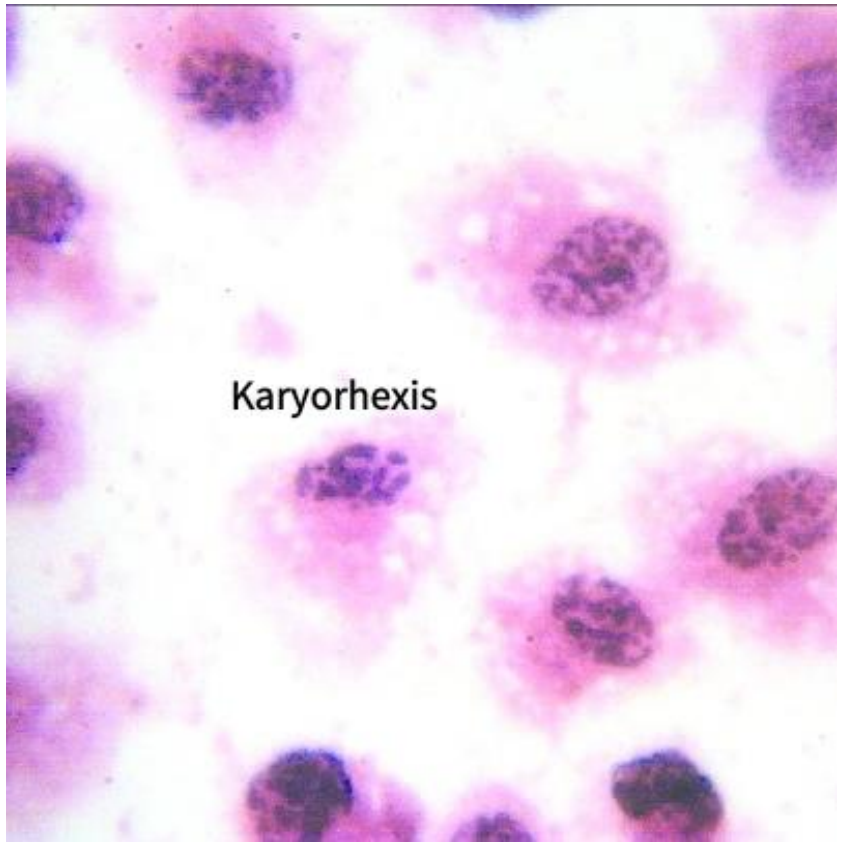


Slide Name:
Nuclear changes in necrosis

Features of slide:

Karyorrhexis: The pyknotic nucleus undergo fragmentation.

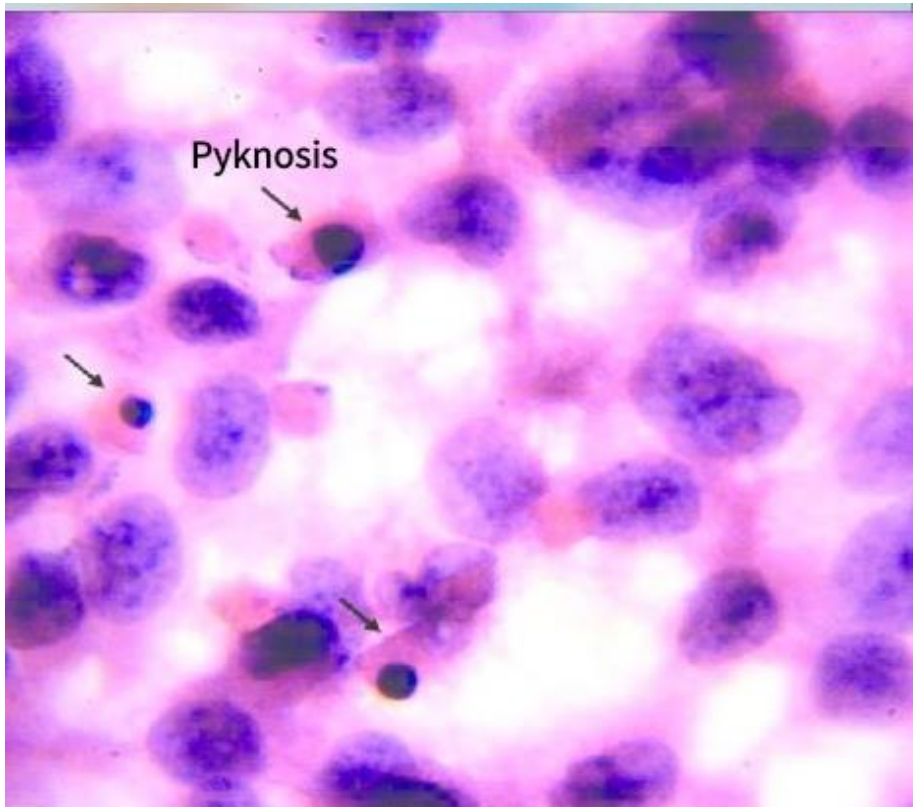


Slide Name:
Nuclear changes in necrosis

Features of slide:

Nuclear changes in necrosis: Nuclear changes result from a breakdown of DNA and chromatin:

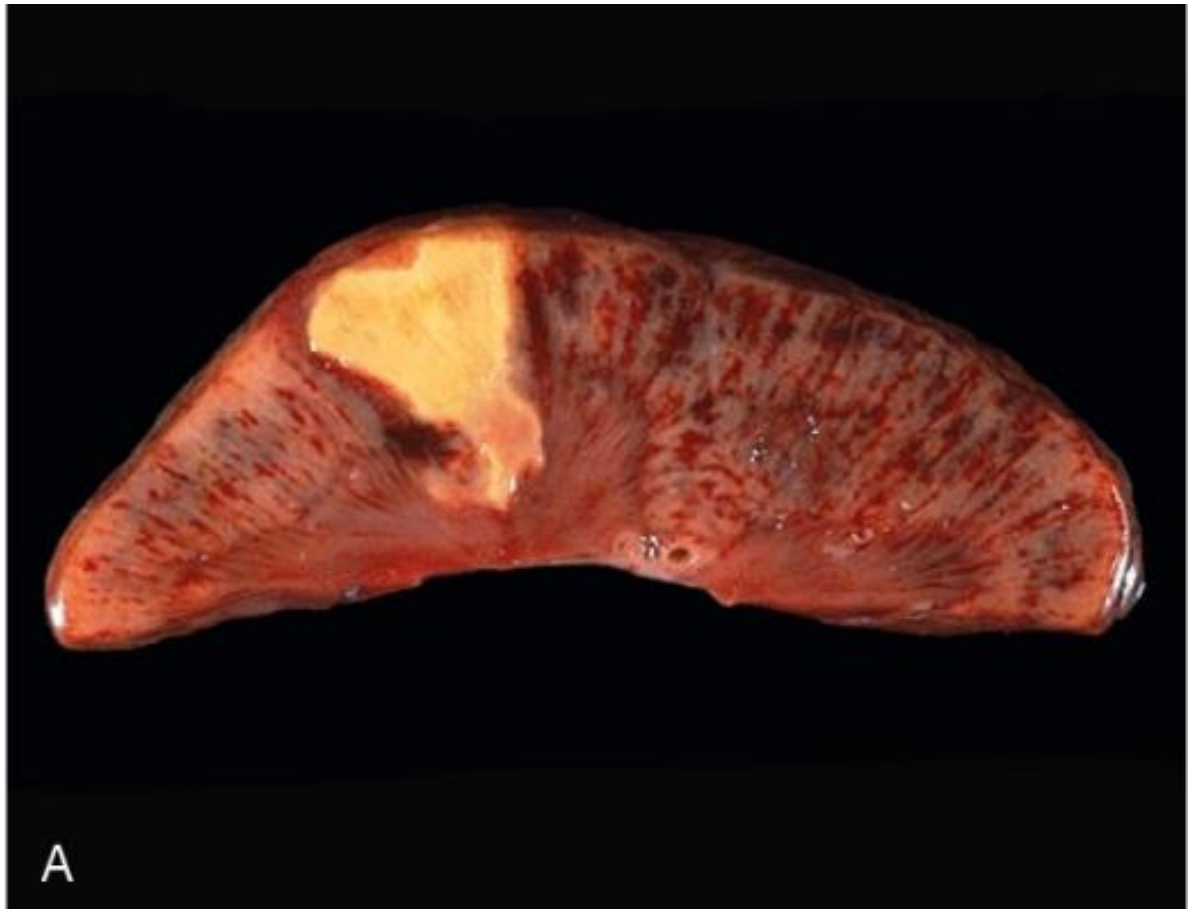
1. **Pyknosis:** nuclear shrinkage and increased basophilia; the DNA condenses into a dark shrunken mass.
2. **Karyorrhexis:** The pyknotic nucleus undergo fragmentation.
3. **Karyolysis:** the basophilia fades because of digestion of DNA by deoxyribonuclease (DNase) activity.



Slide Name:
Coagulative Necrosis of kidney: Gross

Features of slide:

A wedge-shaped kidney infarct *(yellow)* with preservation of the outlines.

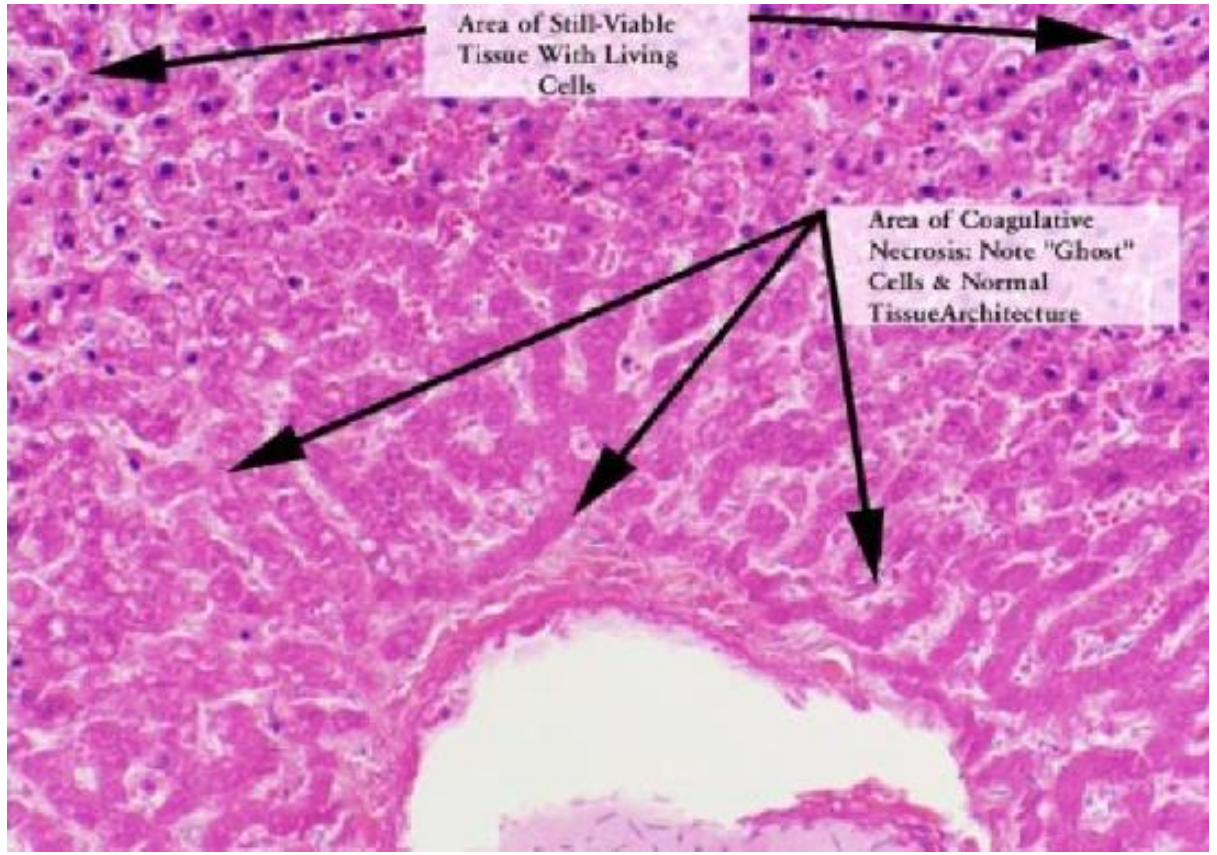


Slide Name:
Coagulative Necrosis of kidney: Microscopic

Features of slide:

Microscopic view of the edge of the infarct with normal kidney. The necrotic cells show:

1. Preserved outlines (ghost cells).
2. Loss of nuclei.
3. An inflammatory infiltrate is present but it is difficult to discern at this magnification.


Area of Still-Viable Tissue With Living Cells
Area of Coagulative Necrosis: Note "Ghost" Cells & Normal TissueArchitecture

Slide Name:
Liquefactive Necrosis of Brain: Gross

Features of slide:

Gross: Liquefactive necrosis of Brain.

An infarct in the brain show:

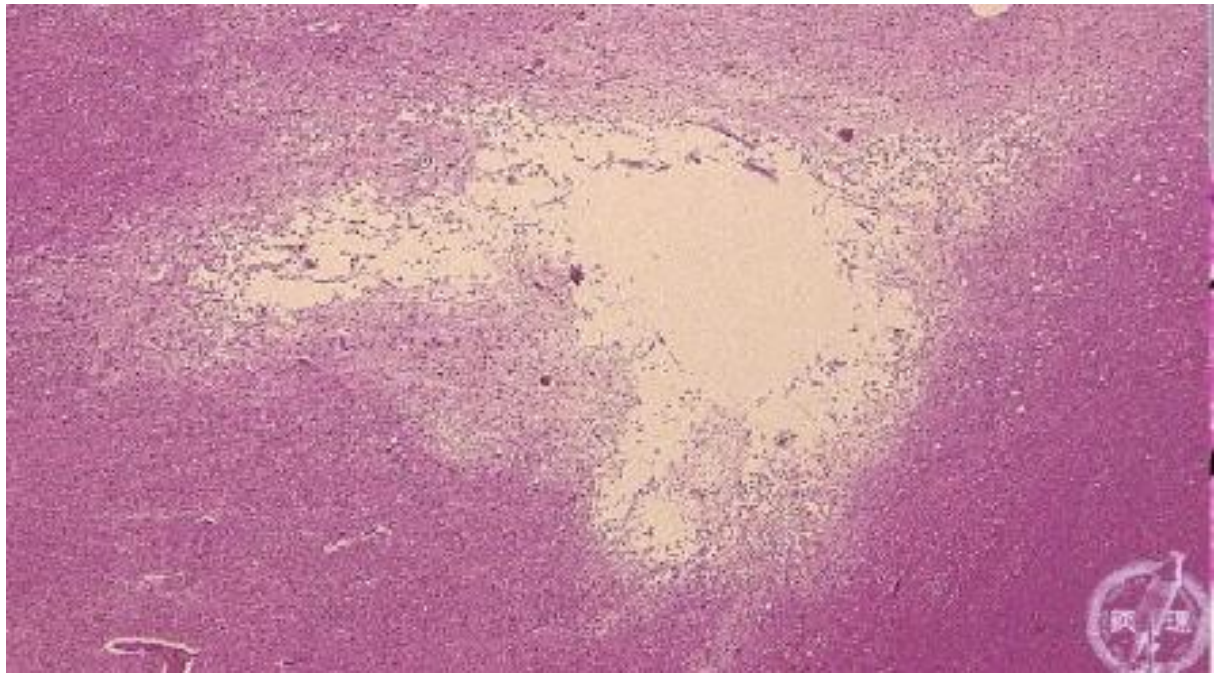
1. Dissolution of the tissue.
2. There is a liquid in the center of the tissue injury.

Slide Name:
Liquefactive Necrosis: Microscopic

Features of slide:

Microscopic: low-power photomicrograph containing a large abscess which show:

1. The center of the abscess contains necrotic debris.
2. There is a rim of viable inflammatory cells surrounding this abscess.



Slide Name:
Gangrenous Necrosis of Lower Extremity: Gross

Features of slide:

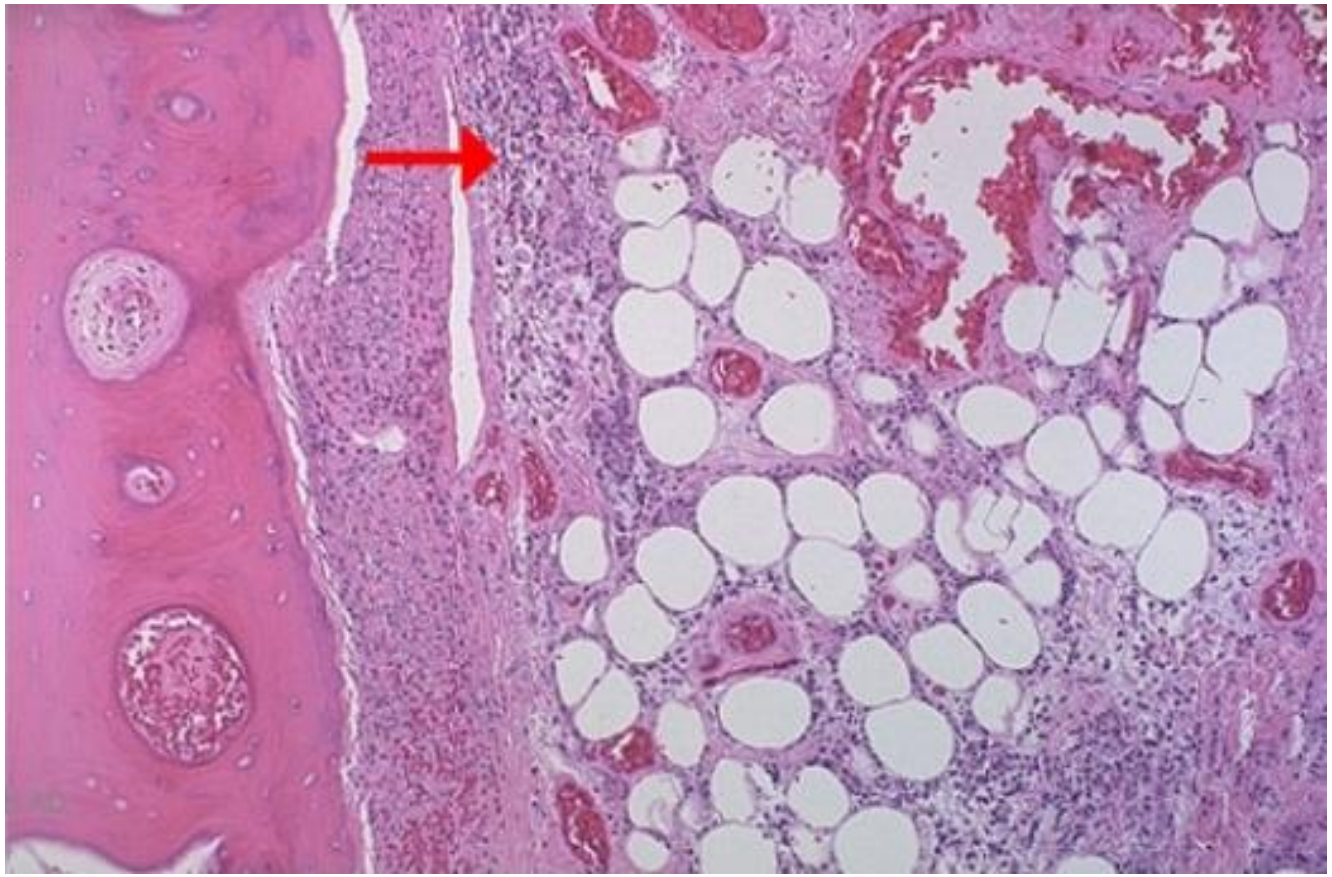
Gross: This is gangrene of the lower extremity.

1. This necrosis is from loss of blood supply.
2. This patient had diabetes mellitus with severe peripheral vascular disease.

Slide Name:
Gangrenous Necrosis: Microscopic

Features of slide:

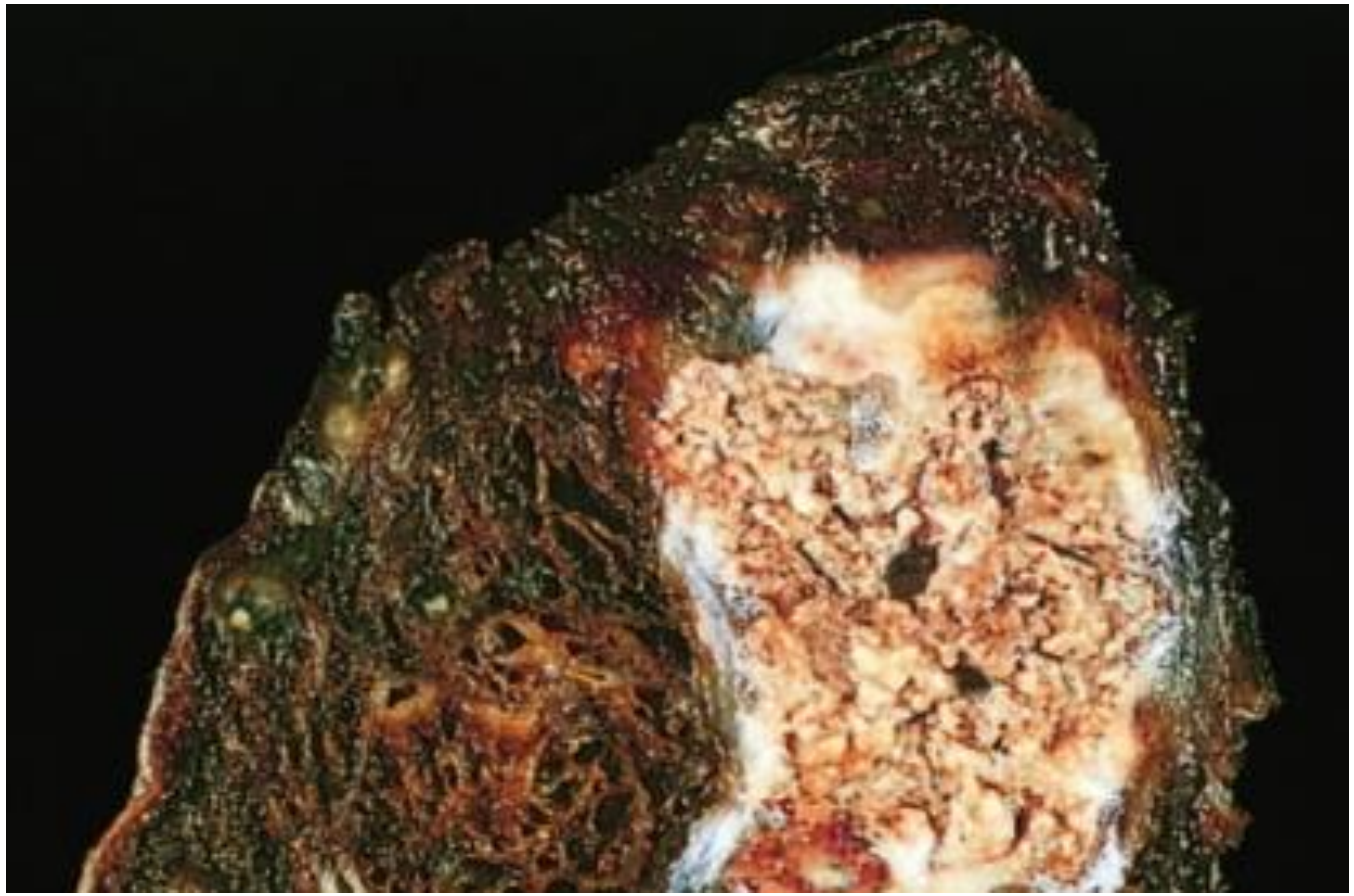
Microscopic: Gangrenous necrosis involves the tissues of a body part. The inflammation seen here is extending beneath the skin of a toe to involve soft tissue (fat and connective tissue at the right) and bone (at the left). Because multiple tissues are non-viable, amputation of such areas is necessary.



Slide Name:
Caseous Necrosis of the Lung : Gross

Features of slide:

Gross: Caseous necrosis of the lung show a large area of caseous necrosis containing yellow-white (cheesy) debris.



Slide Name:
Caseous Necrosis of the Lung: Gross

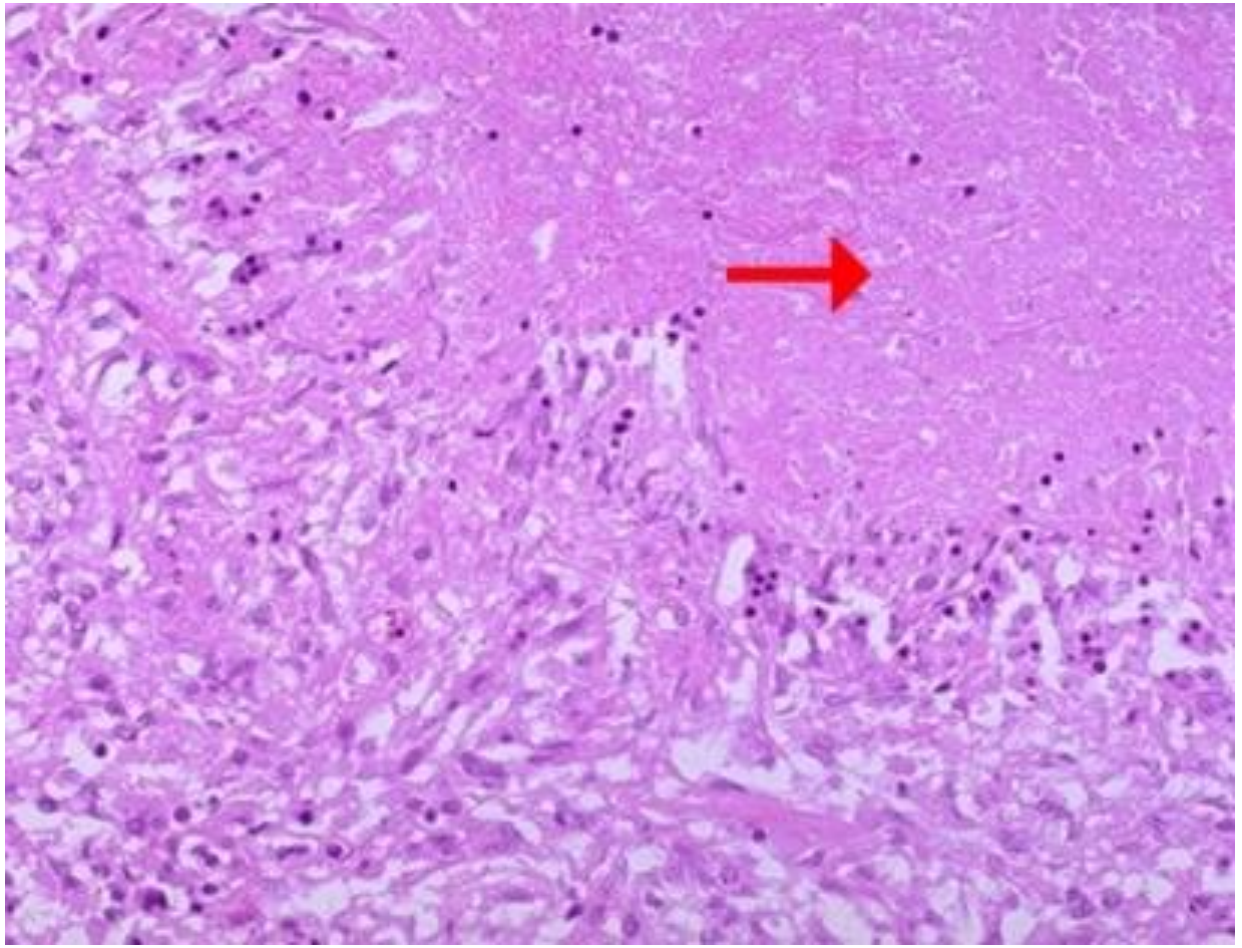
Features of slide:

Gross: Caseous necrosis of the lung show a large area of caseous necrosis containing yellow-white (cheesy) debris.

Slide Name:
Caseous Necrosis : Microscopic

Features of slide:

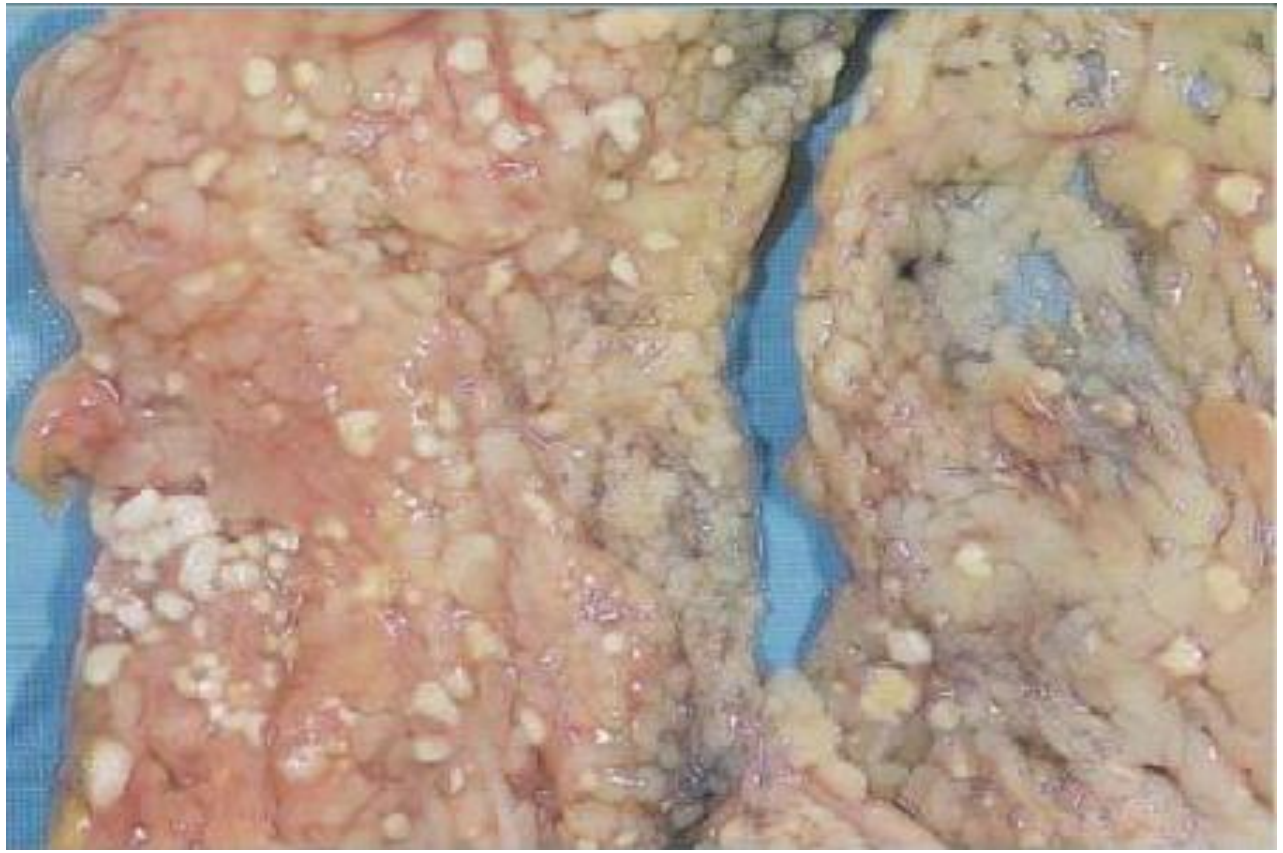
Microscopic: caseous necrosis characterized by Acellular pink areas of necrosis surrounded by a granulomatous inflammatory process.



Slide Name:
Fat Necrosis of the Pancreas: Gross

Features of slide:

Gross: Fat necrosis in acute pancreatitis. The areas of white chalky deposits represent foci of fat necrosis with calcium soap formation (saponification) at sites of lipid breakdown



Slide Name:
Fat Necrosis: Microscopic

Features of slide:

Microscopic: The necrotic fat cells have :

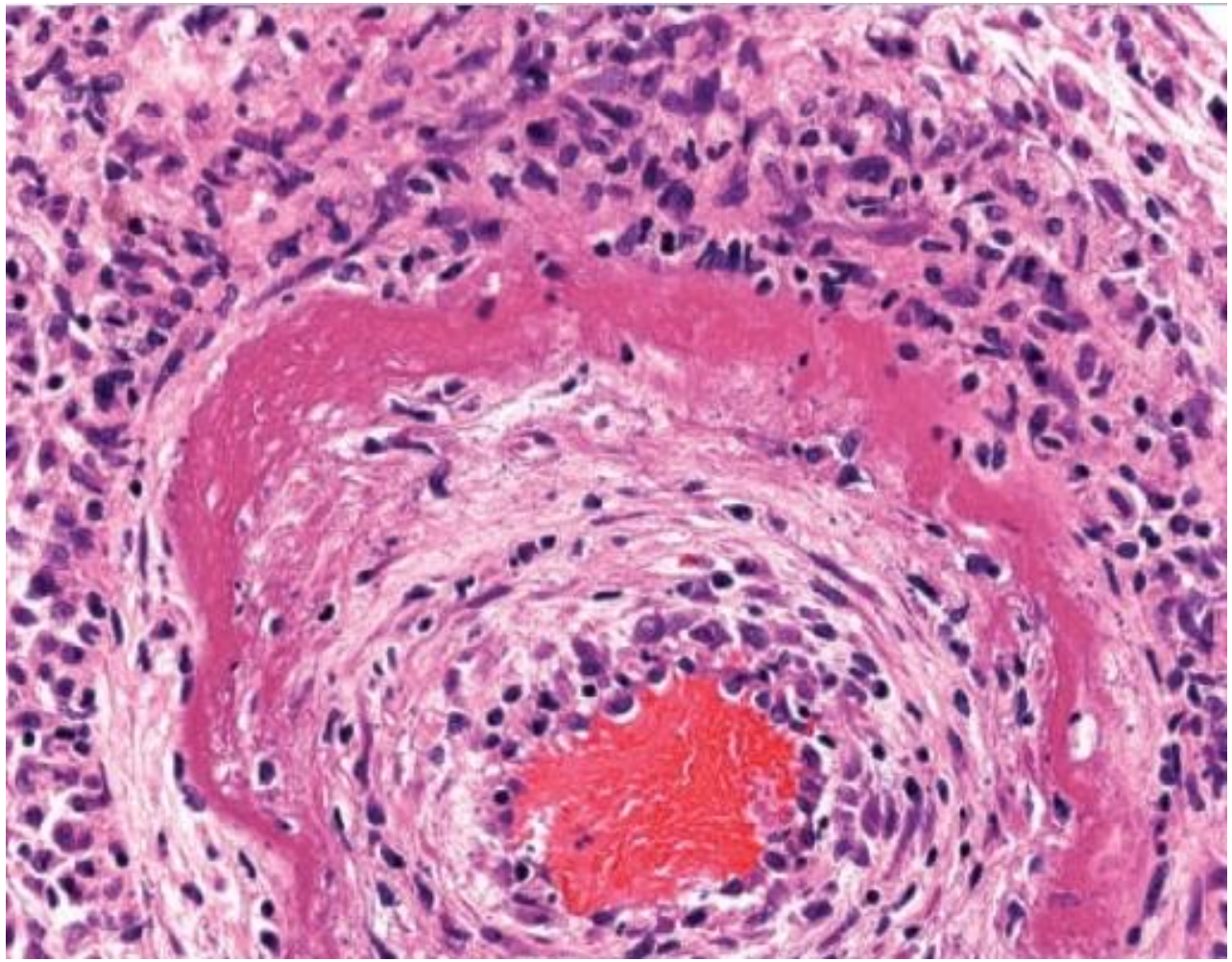
1. Vague cellular outlines.
2. They lost their nuclei.
3. Their cytoplasm has become a pink mass of necrotic material.

Slide Name:
Fibrinoid Necrosis of an Artery: Microscopic

Features of slide:

Fibrinoid necrosis of an artery which show:

1. The wall of the artery shows a circumferential bright pink area of necrosis with protein deposition and inflammation.

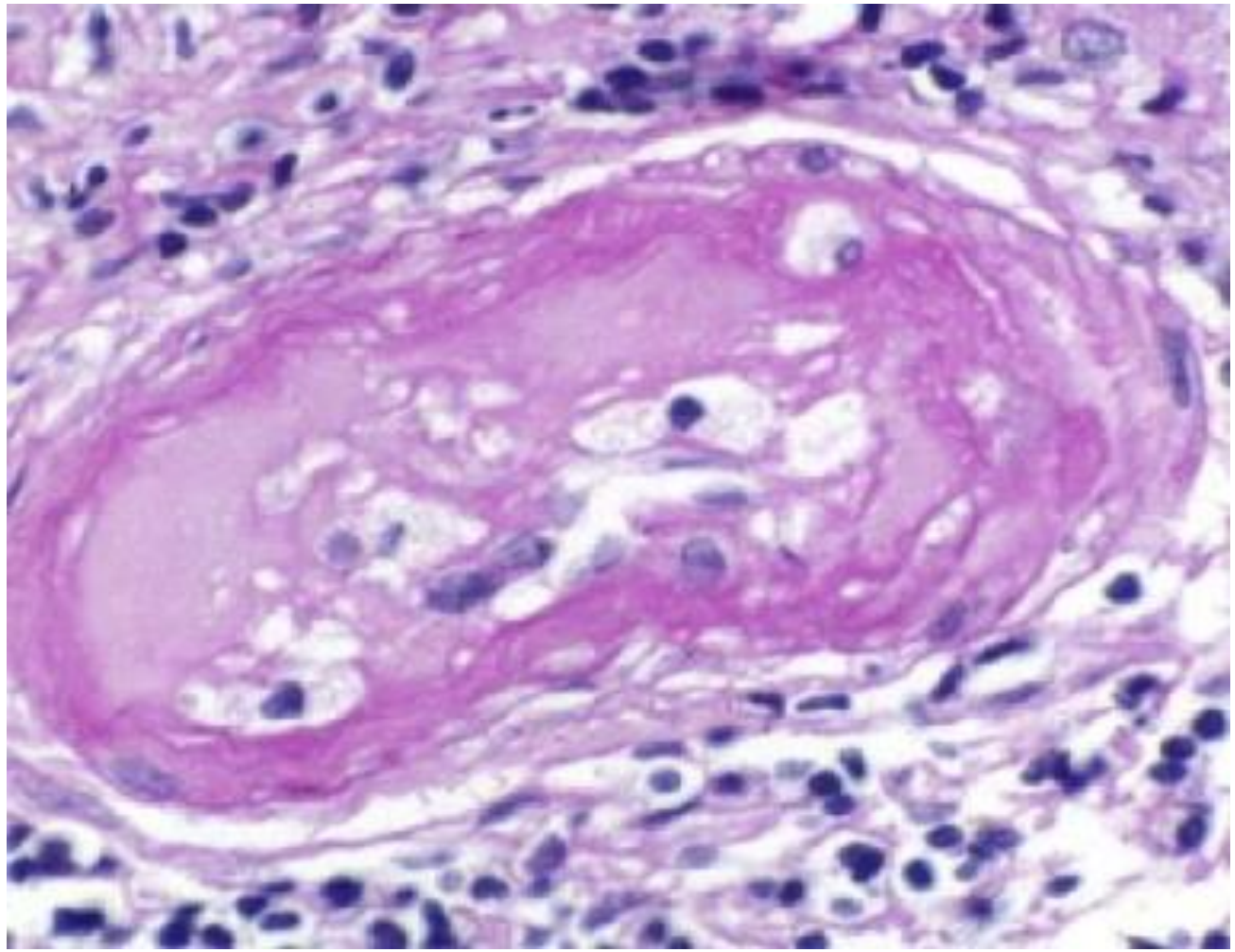


Slide Name:
Fibrinoid Necrosis: Microscopic

Features of slide:

Fibrinoid necrosis of an artery which show:

1. The wall of the artery shows a circumferential bright pink area of necrosis with protein deposition and inflammation.

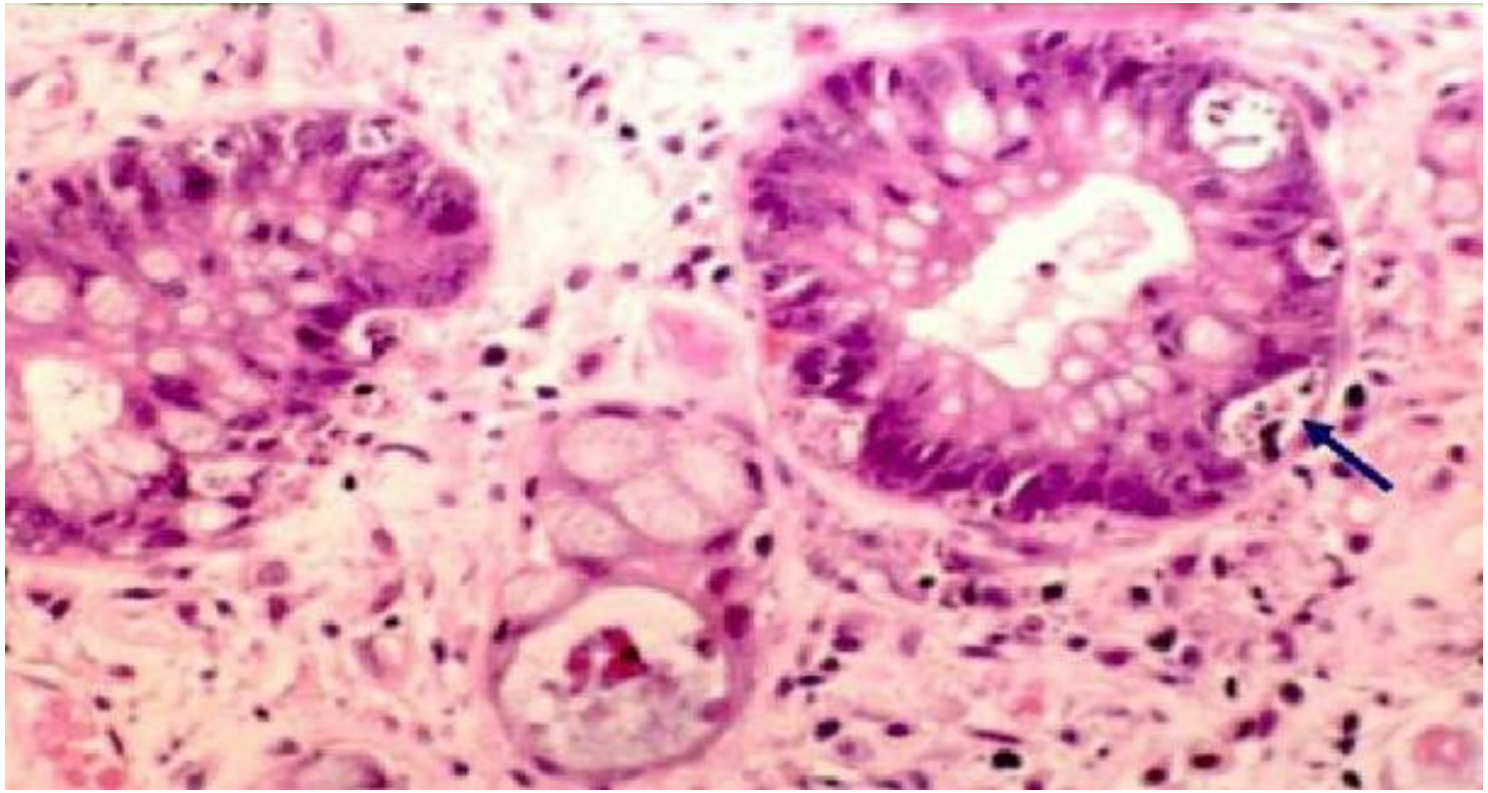


Slide Name:
Apoptosis

Features of slide:

Morphologic appearance of Apoptotic cells (arrows) in colonic epithelium which show:

1. Fragmented nuclei.
2. Condensed chromatin.
3. Shrunken cell bodies.
4. Some with pieces falling off.



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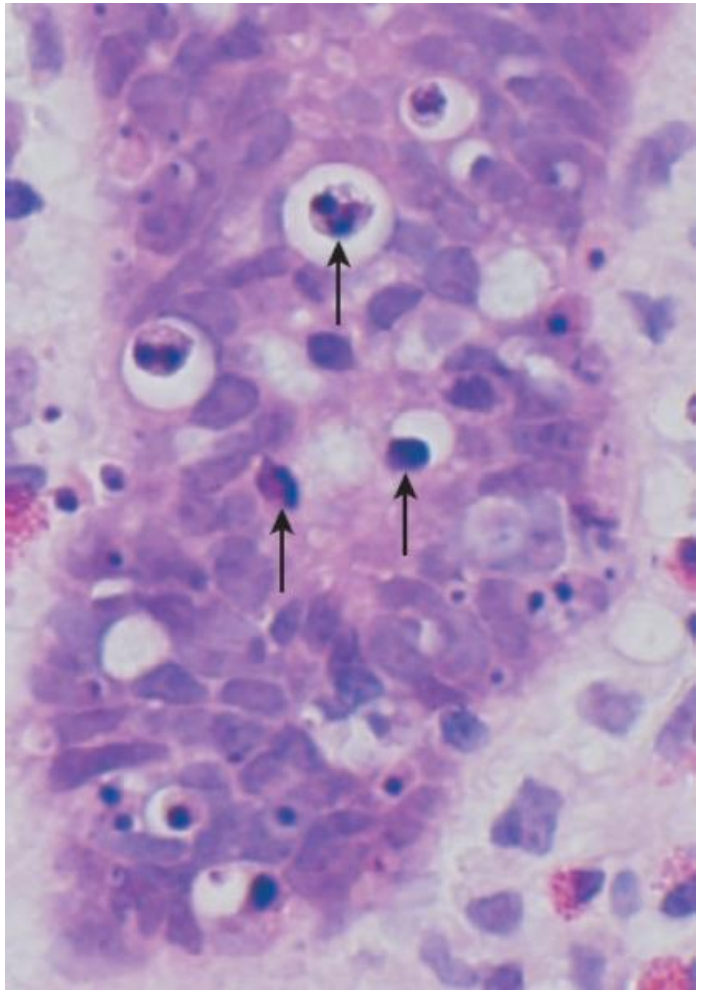


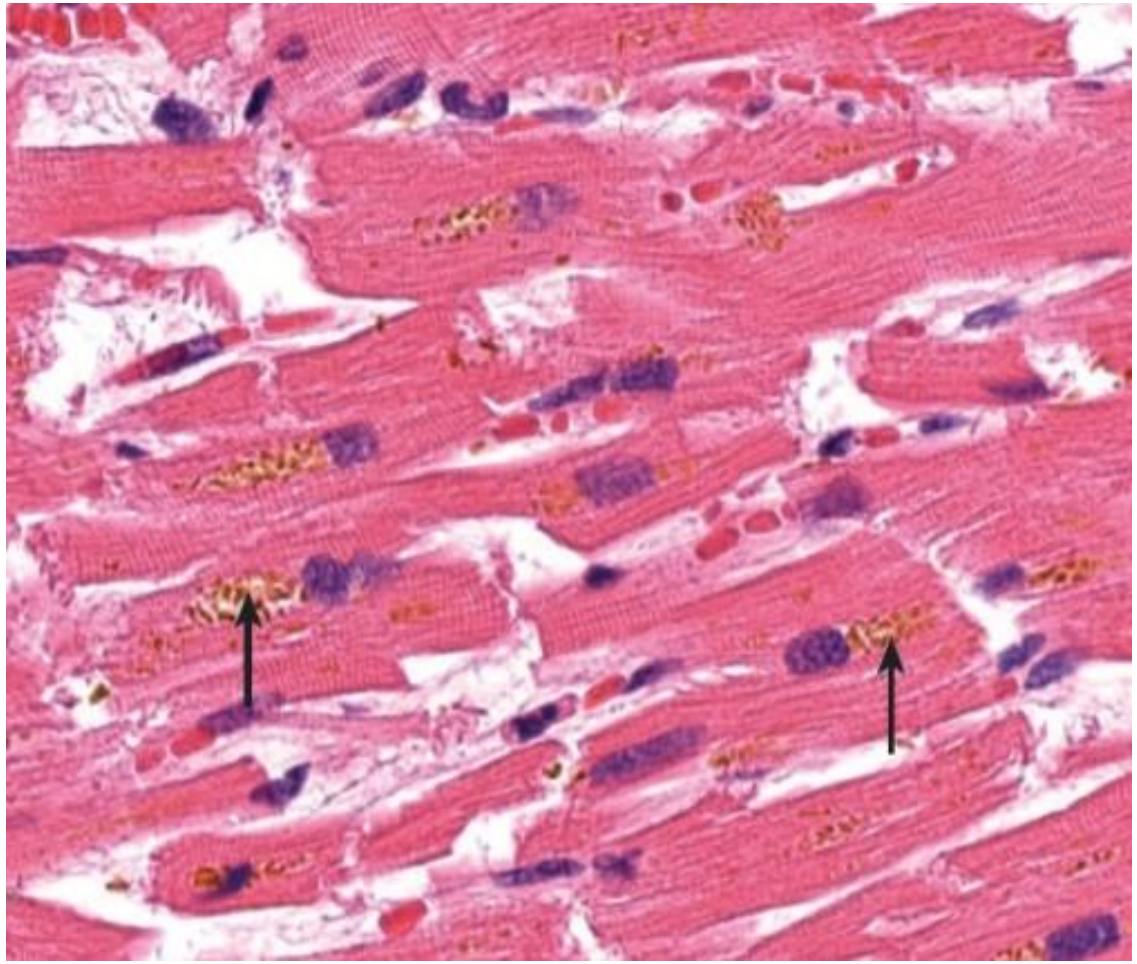
Slide Name:

Intracellular Accumulations of Lipofuscin: by L. Microscopic

Features of slide:

Lipofuscin granules in cardiac myocytes :

1. Fine yellow-brown pigment granules.
2. Composed of lipid-containing residues of lysosomal digestion.
3. It is considered to be one of the aging pigments.
4. It is specifically arranged around the nucleus.



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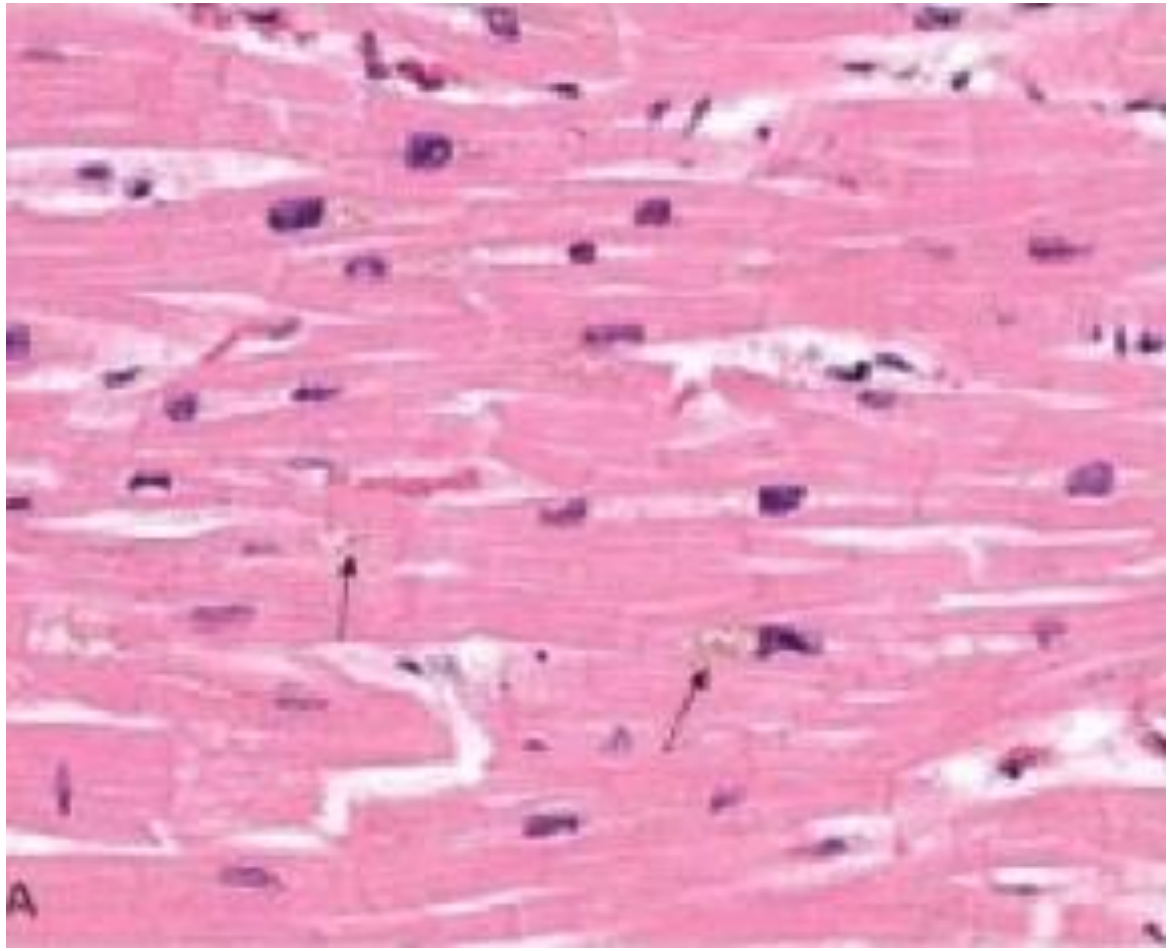


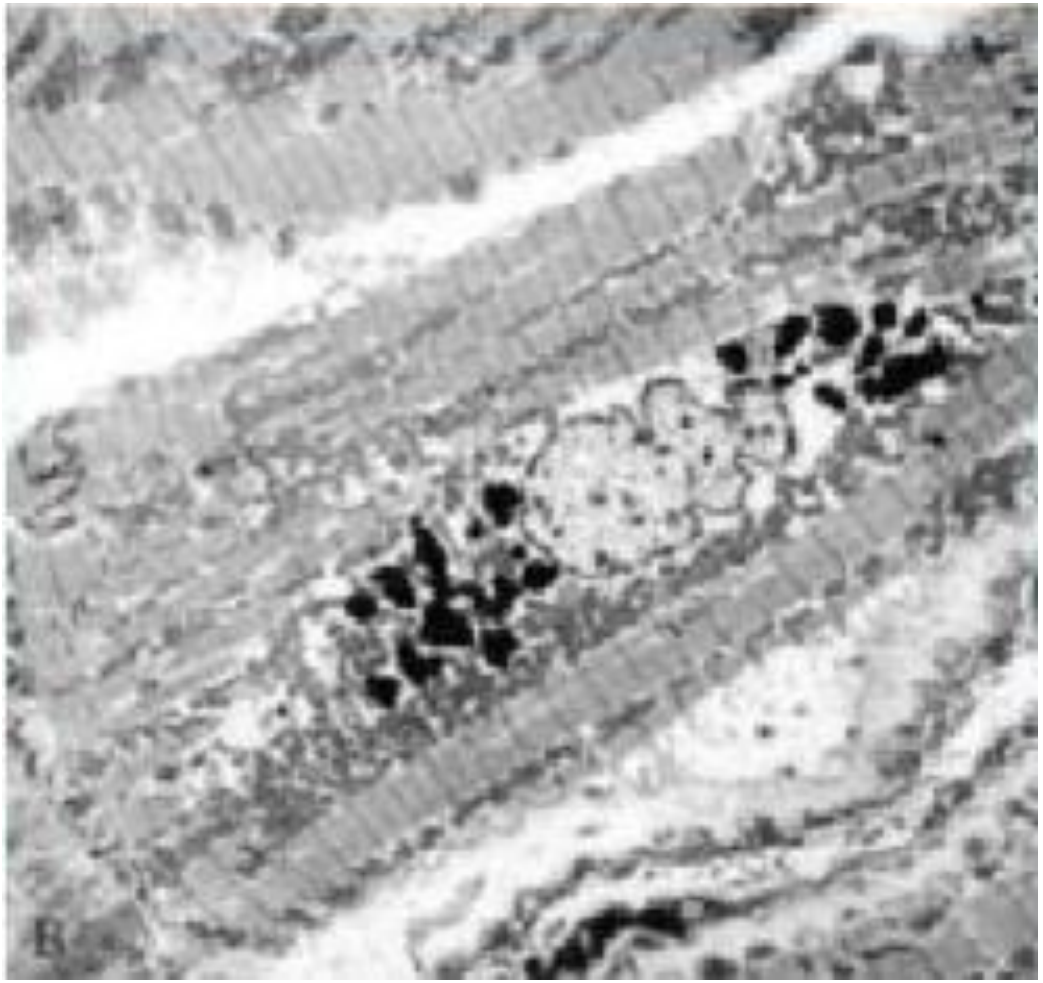
Slide Name:

Intracellular Accumulations of Lipofuscin: by E. Microscope

Features of slide:

Lipofuscin granules in cardiac myocytes :

1. **Black** pigment granules.
2. Composed of lipid-containing residues of lysosomal digestion.
3. It is considered to be one of the aging pigments.
4. It is specifically arranged around the nucleus.

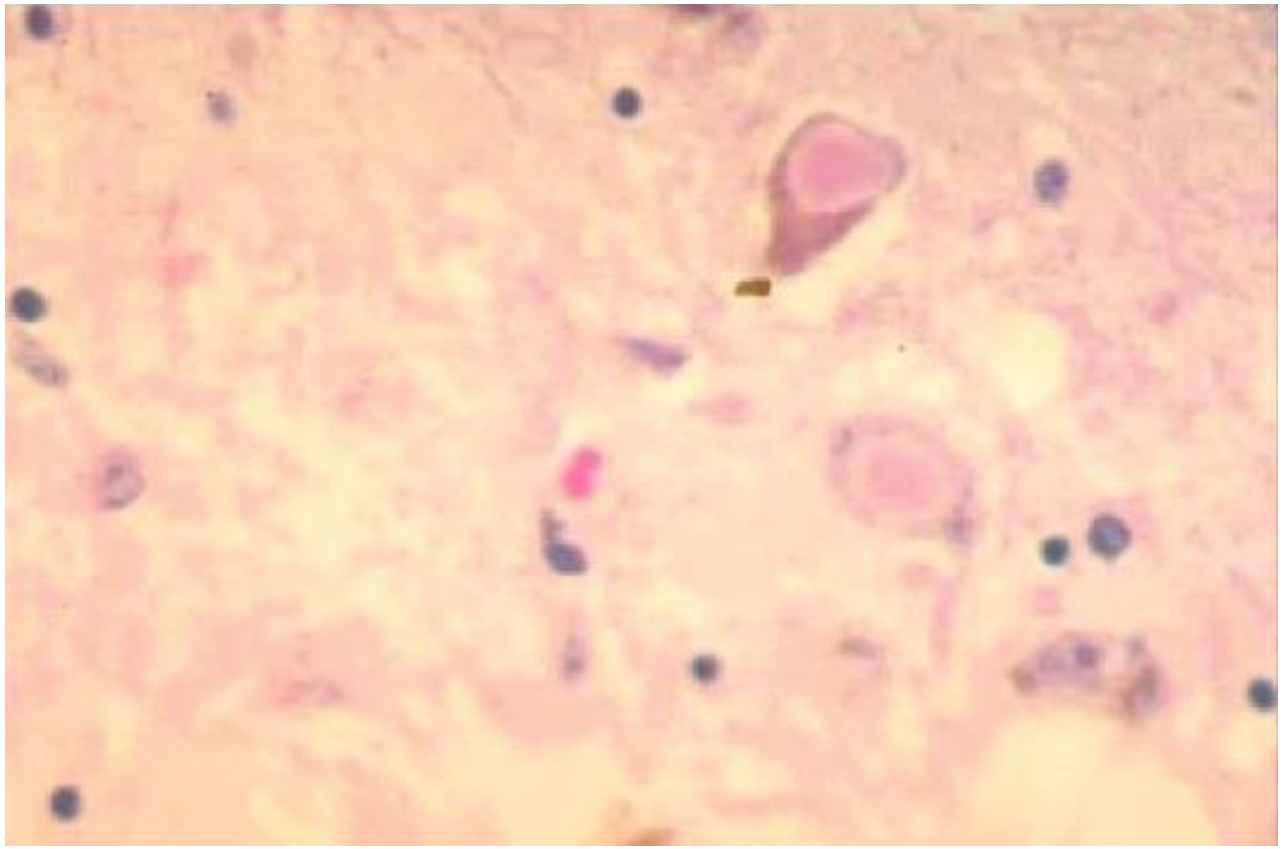


Slide Name:
Intracellular Accumulations of Lewy Bodies: Microscopic

Features of slide:

Nervous tissue showing Lewy bodies:

1. Abnormal aggregations of protein inside nerve cells in some diseases.
2. A classical Lewy body is an eosinophilic cytoplasmic inclusion consisting of a dense core surrounded by a halo of radiating fibrils.



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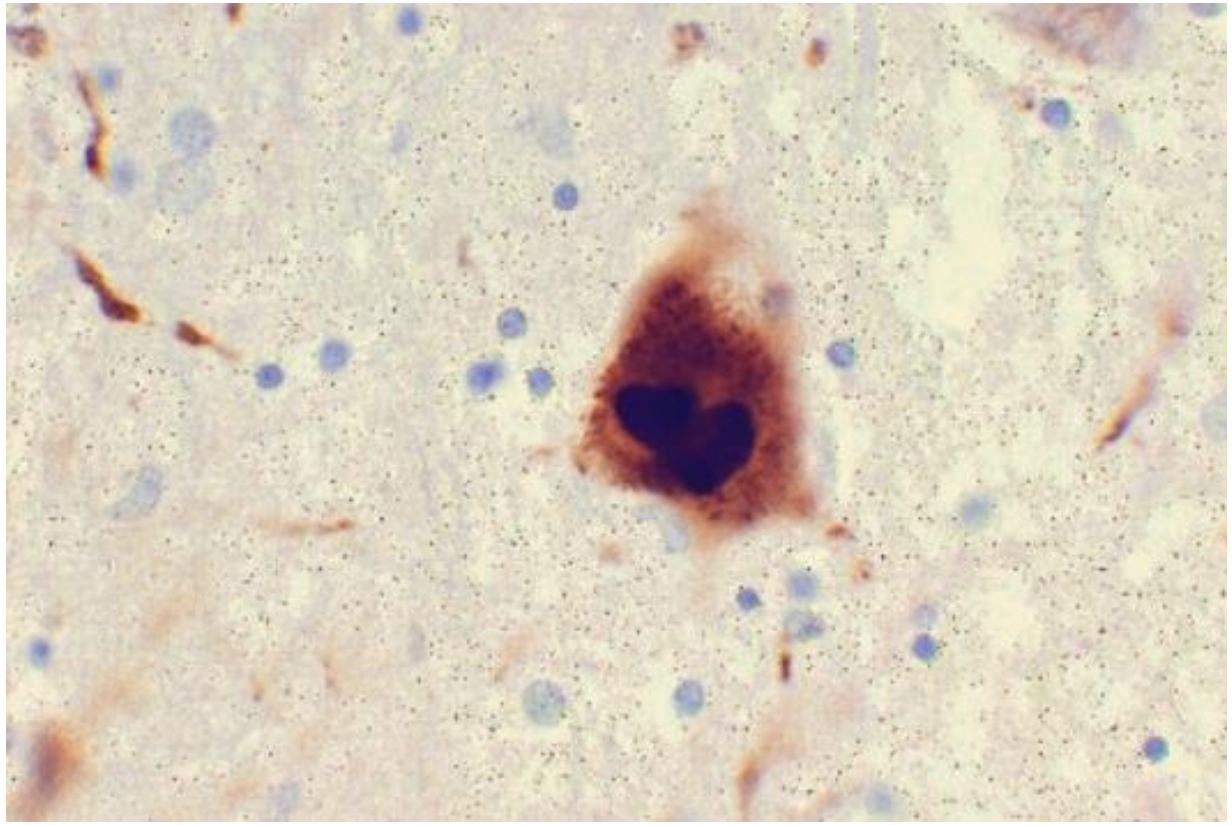
1. Abnormal aggregations of protein inside nerve cells in some diseases.
2. A classical Lewy body is an eosinophilic cytoplasmic inclusion consisting of a dense core surrounded by a halo of radiating fibrils.



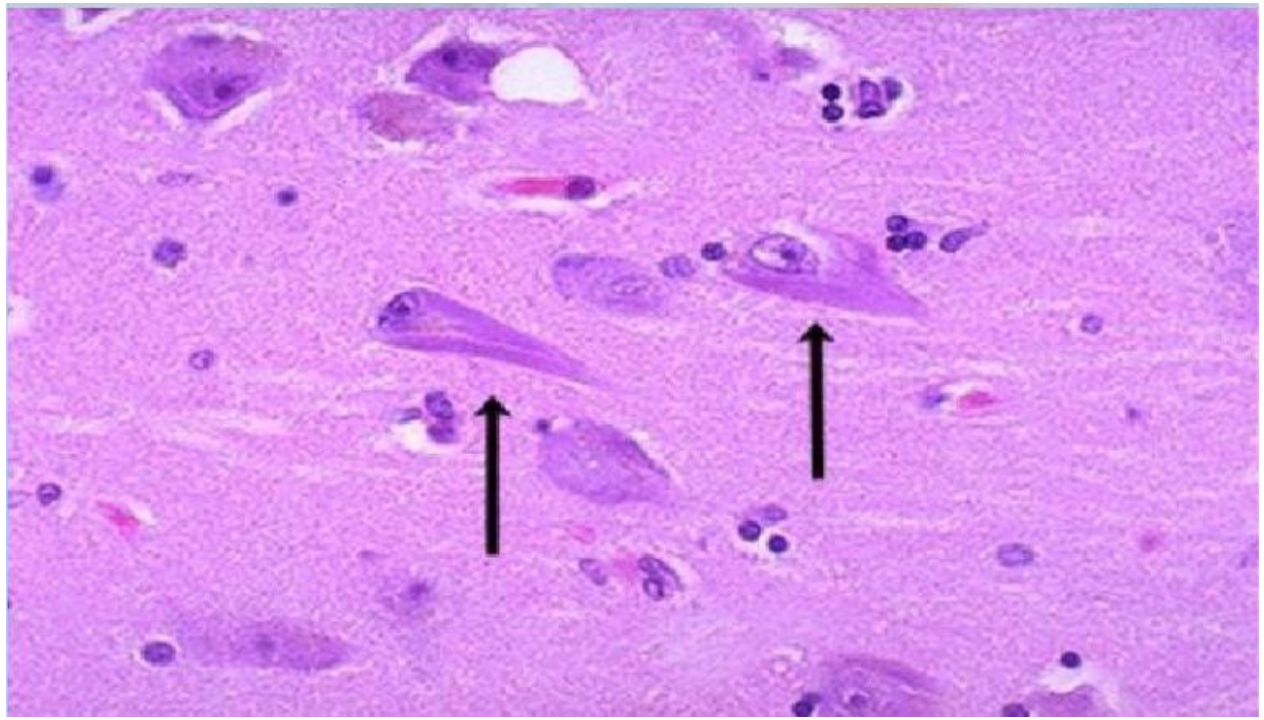
Slide Name:

Intracellular Accumulations of Neurofibrillary Tangle: Microscopic

Features of slide:

Neurofibrillary tangles (NFTs):

1. are aggregates of hyperphosphorylated tau protein that are known as a primary marker of Alzheimer's disease.
2. The cytoskeletal filaments are grouped together in the elongated pink tangles.



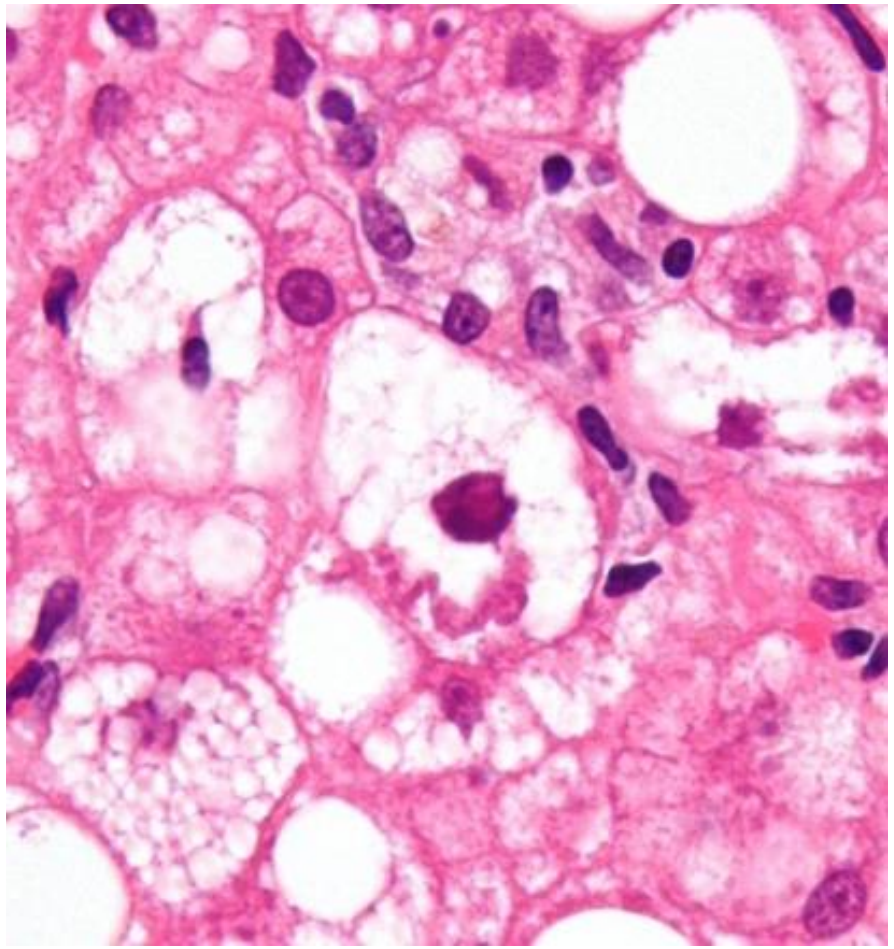
Slide Name:

Intracellular Accumulations of Mallory Bodies: Microscopic

Features of slide:

Mallory bodies:

1. Are eosinophilic cytoplasmic inclusions that are aggregates of denatured keratin filaments.
2. They have a *twisted rope-like* appearance.
3. They often have neutrophils around them.
4. They frequently are seen in hepatocytes undergoing ballooning degeneration.

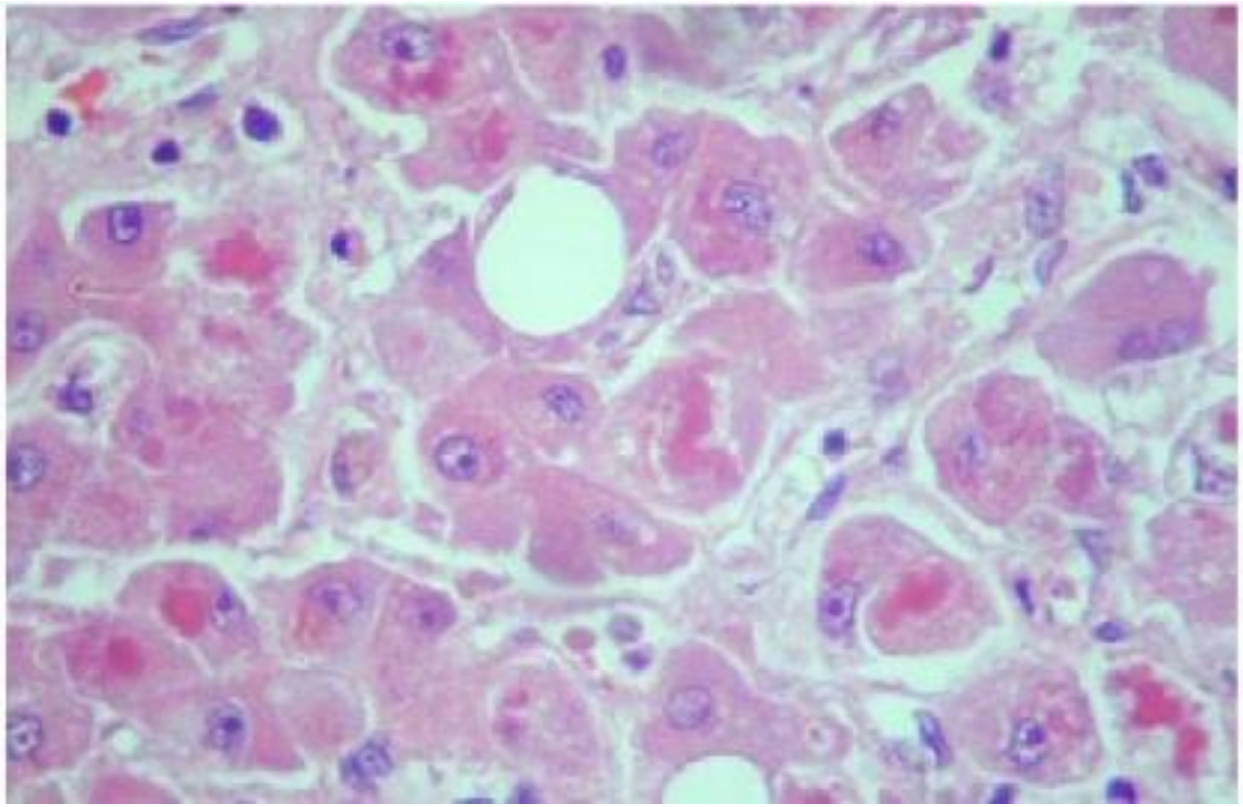


Slide Name:

Intracellular Accumulations of Mallory Bodies: Microscopic

Features of slide:

High power micrograph of a Liver biopsy Stained by H&E.
- Note Mallory body; eosinophilic cytoplasmic inclusion appears as a twisted rope in a Hepatocyte that is surrounded by Neutrophils.



Slide Name:

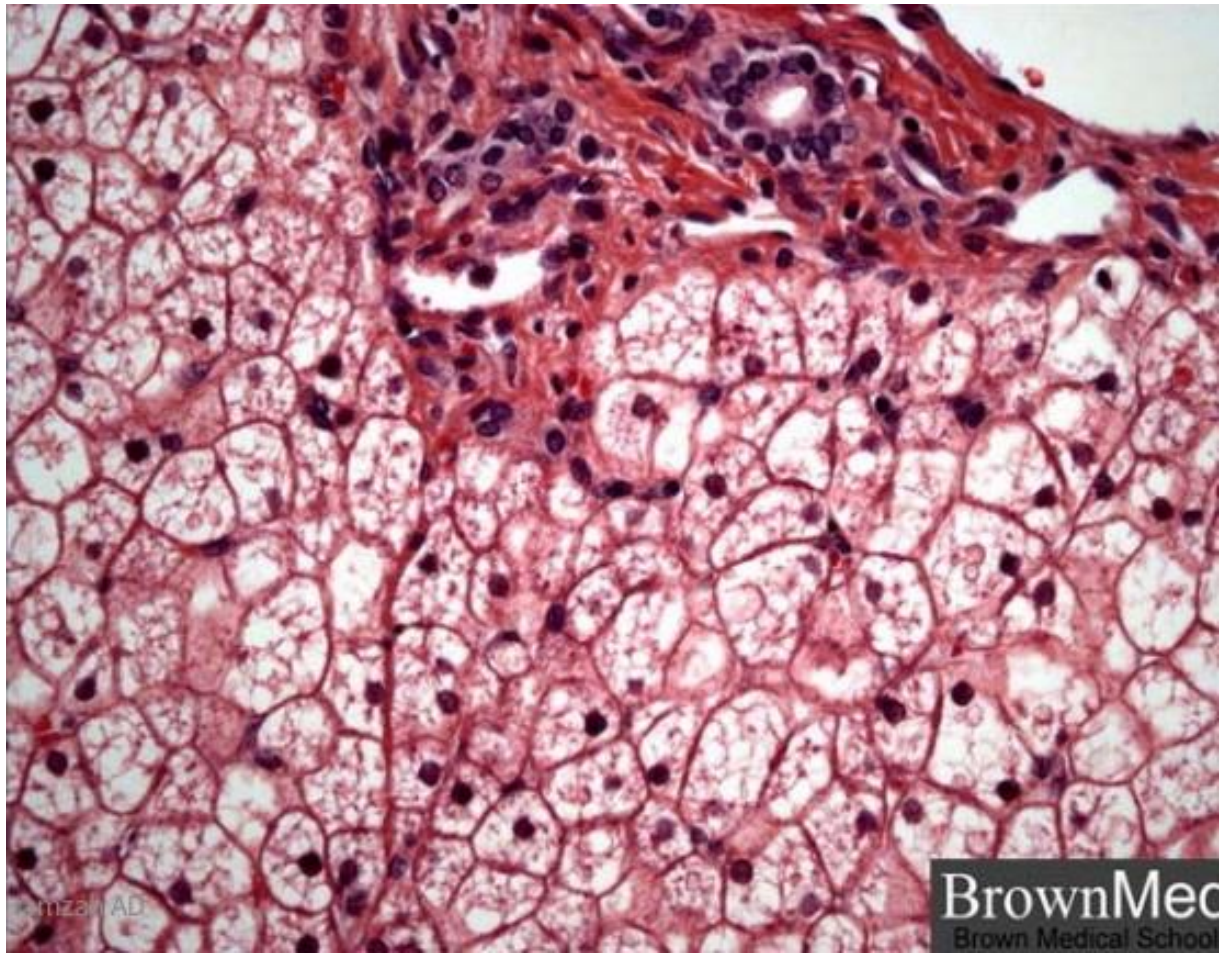
Intracellular Accumulations of Glycogen Storage Disease: Microscopic

Features of slide:

Glycogen accumulation in Hepatocytes. Can be demonstrated microscopically by:

1. Mosaic pattern: enlarged hepatocytes with pale cytoplasm compressing sinusoids.

2. Fatty change, hyperglycogenated nuclei.



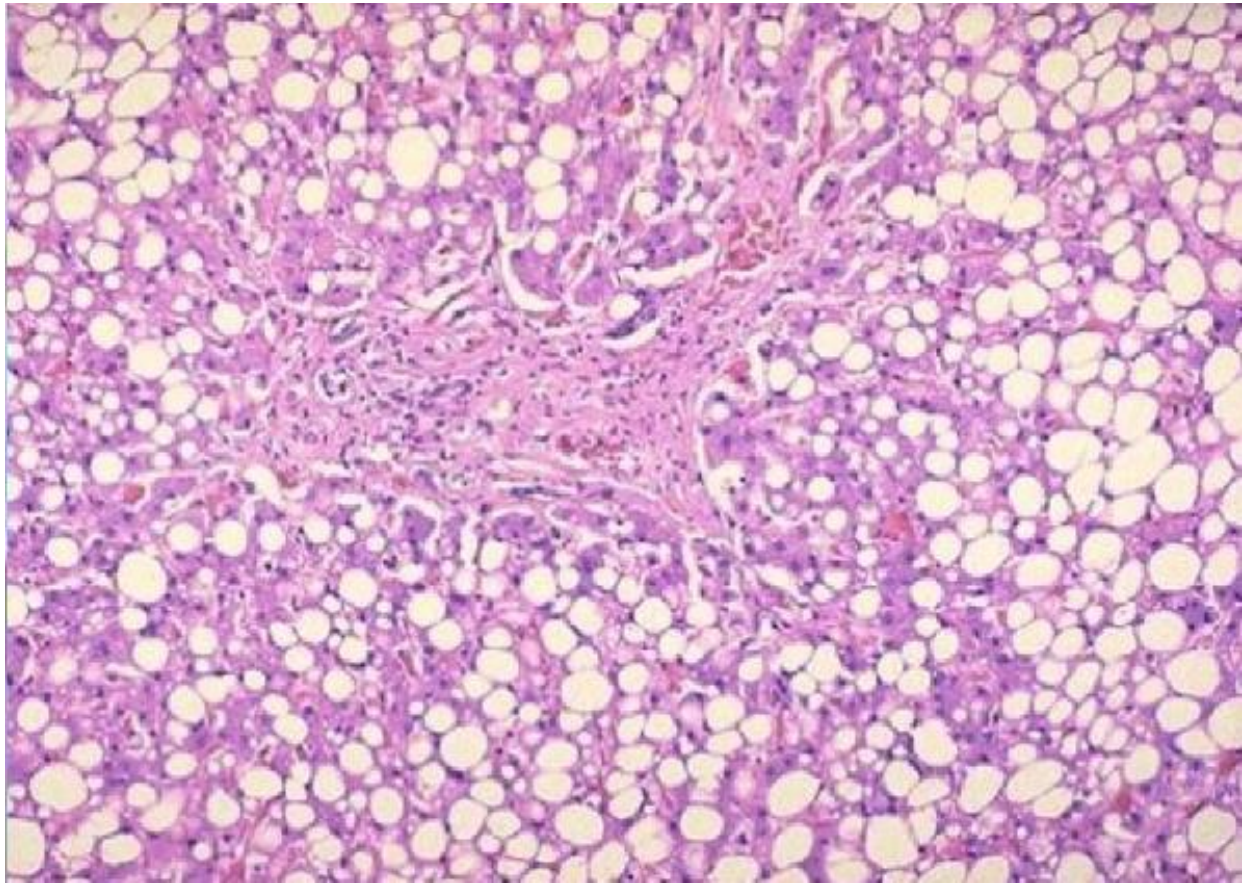
Slide Name:

Intracellular Accumulations of Fatty Changes (steatosis): Microscopic

Features of slide:

Steatosis (also called fatty change):

1. Is abnormal retention of fat (lipids) within a cell or organ.
2. Steatosis reflects an impairment of the normal processes of synthesis and elimination of triglyceride fat.
3. Excess lipid accumulates in vesicles that displace the cytoplasm.



Slide Name:

Intracellular Accumulations of Fatty Changes (steatosis): Gross

Features of slide:

Histological section of a liver showing severe steatosis. The clear cytoplasmic vacuoles would have contained lipid in the living cells, however the histological fixation caused it to be dissolved and hence only empty spaces remain.

Slide Name:
Intracellular Accumulations of Calcification: Microscopic

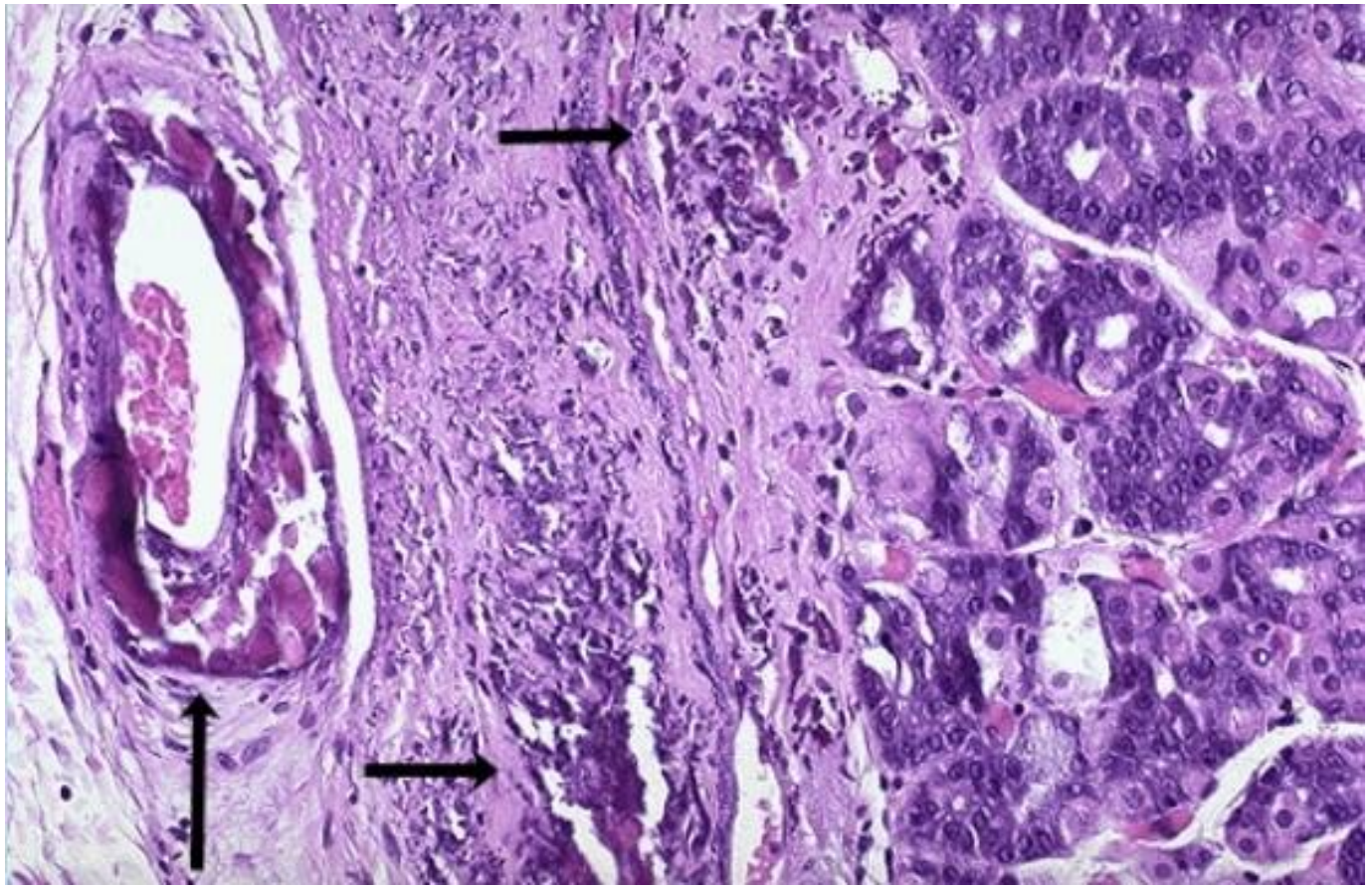
Features of slide:

This is calcification in the wall of the stomach.

1. At the far left is an artery with calcification in its wall.

2. There are also irregular bluish-purple deposits of calcium in the submucosa.

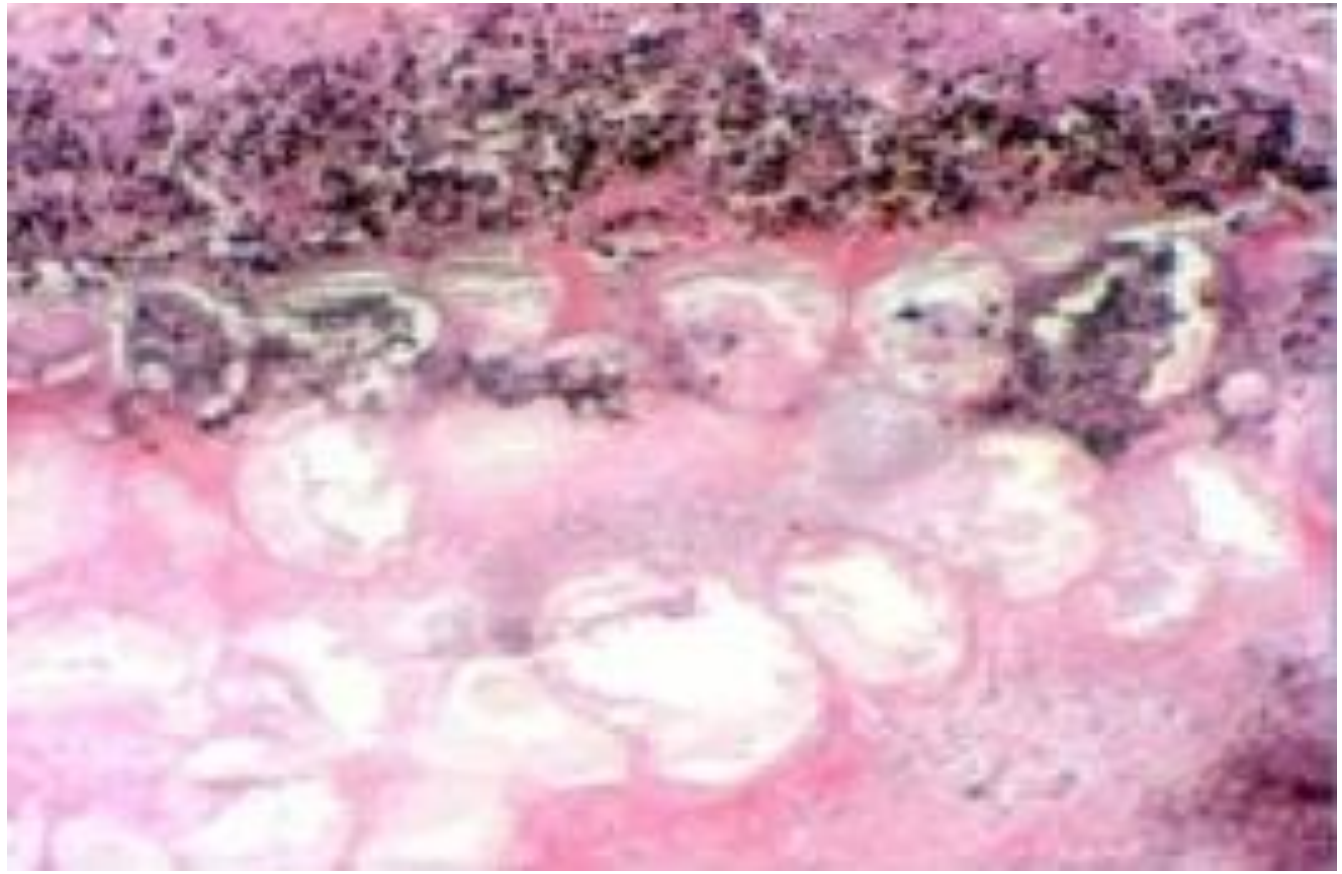
3. Calcium is more likely to be deposited in tissues that are damaged.



Slide Name:
Intracellular Accumulations of Calcification: Microscopic

Features of slide:

Calcium is more likely to be deposited in tissues that are damaged.



Slide Name:

Intracellular Accumulations of Calcification: Microscopic

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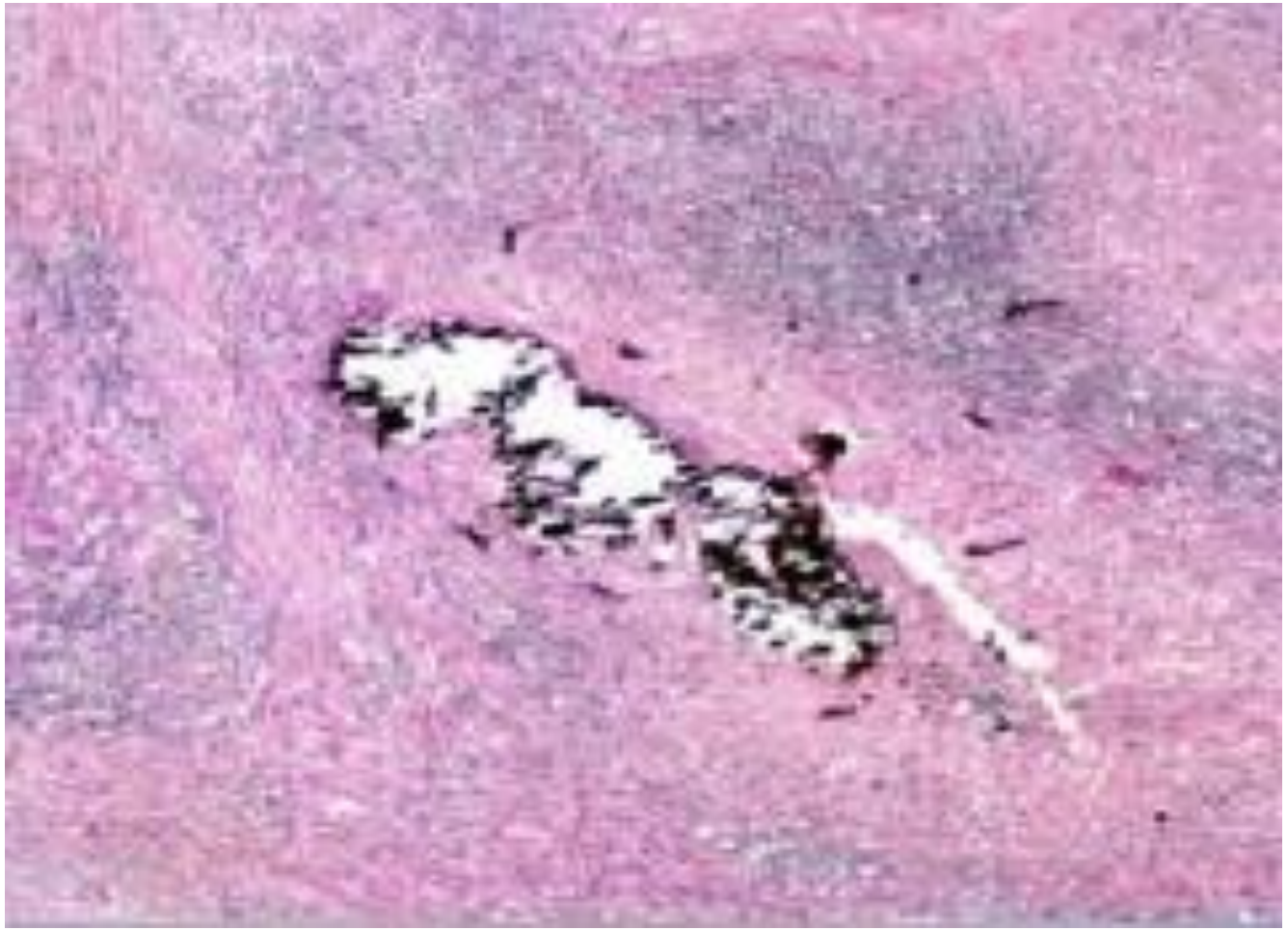


Inflammation

Slide Name:
Vascular Reactions in Acute Inflammation: Microscopic

Features of slide:

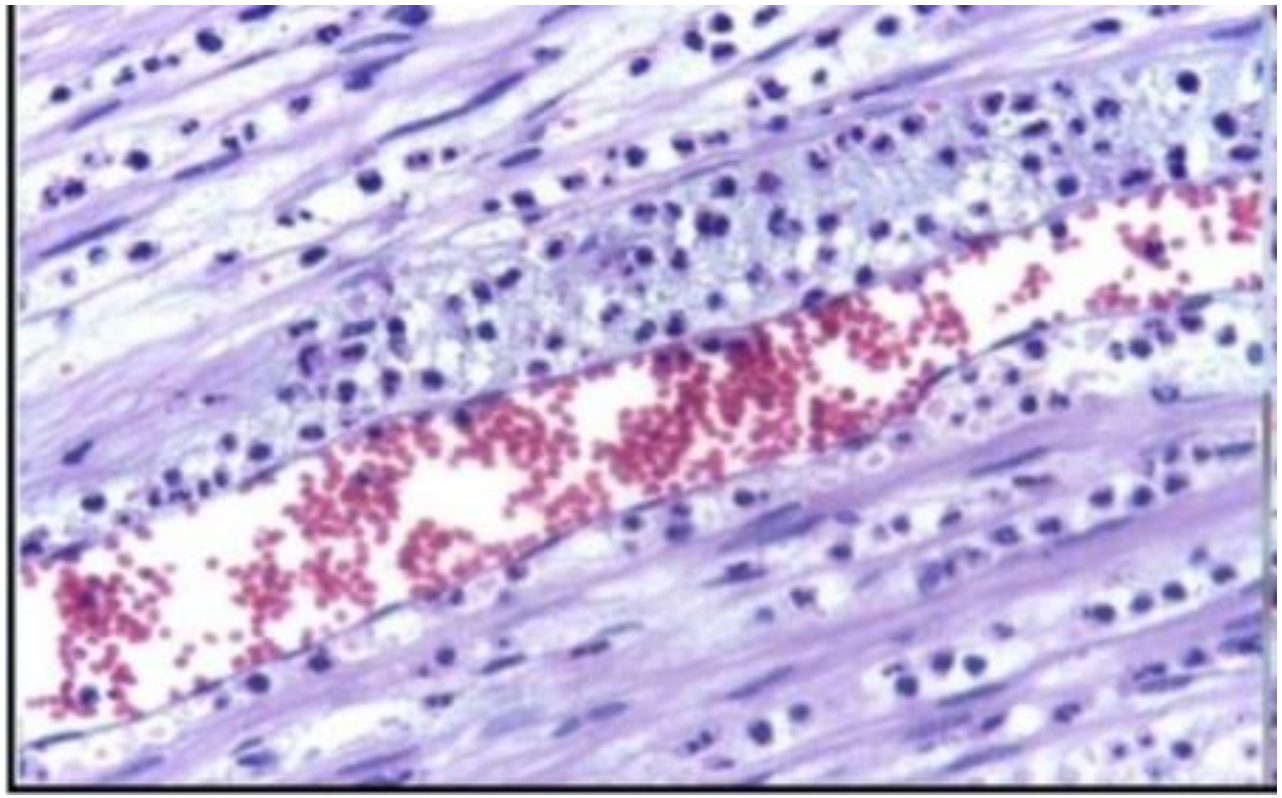
The series of events in the process of inflammation are:

1. Vasodilation: greater blood flow to the area of inflammation, resulting in redness and heat.

2. Vascular permeability: endothelial cells become "leaky".

3. Exudation: fluid, proteins, red blood cells, and white blood cells escape from the intravascular space.

4. Vascular stasis: slowing of the blood



Slide Name:
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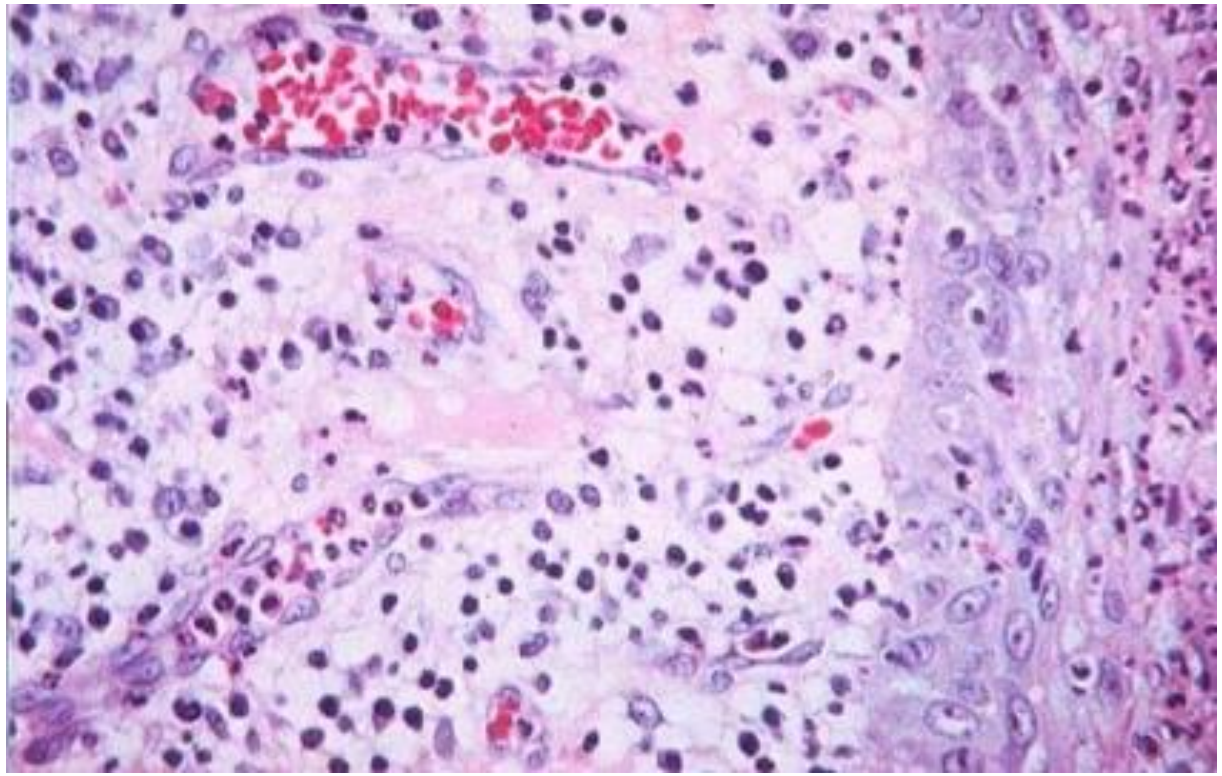
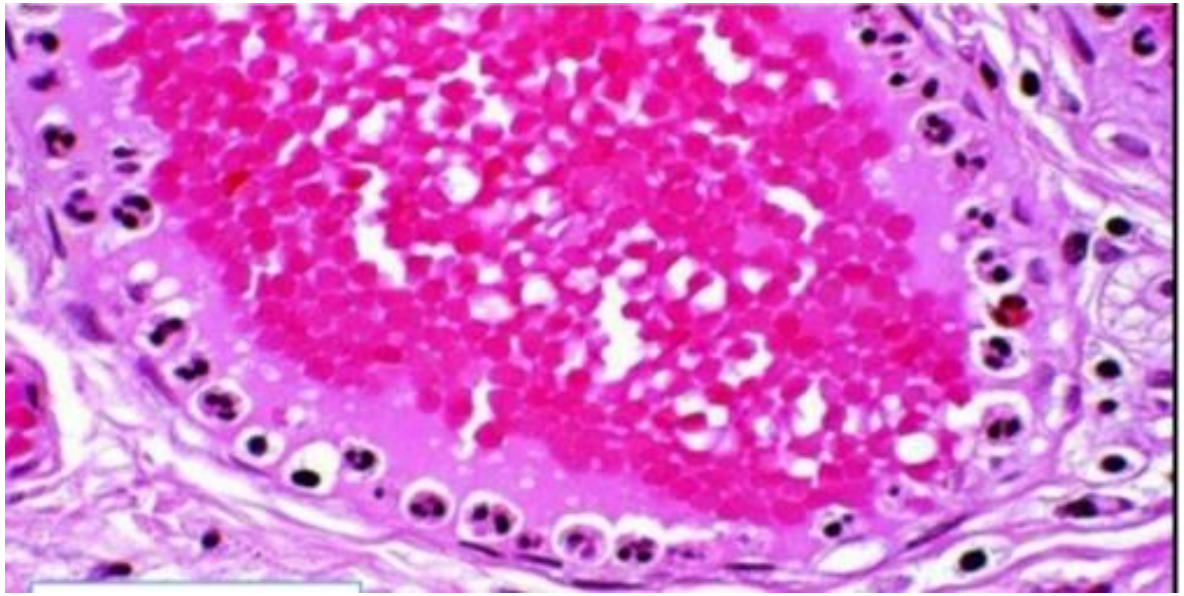


Slide Name:
Migration of Leukocytes during the acute Inflammation: Microscopic

Features of slide:

1. Leukocytes are recruited from the blood into the extravascular tissue, migrate to the site of infection or tissue injury, and are activated to perform their functions.
2. Neutrophils predominate in the early inflammatory infiltrate and are later replaced by monocytes and macrophages.
3. Leukocytes can eliminate microbes and dead cells by phagocytosis, followed by their destruction in phagolysosomes.



Features of slide:

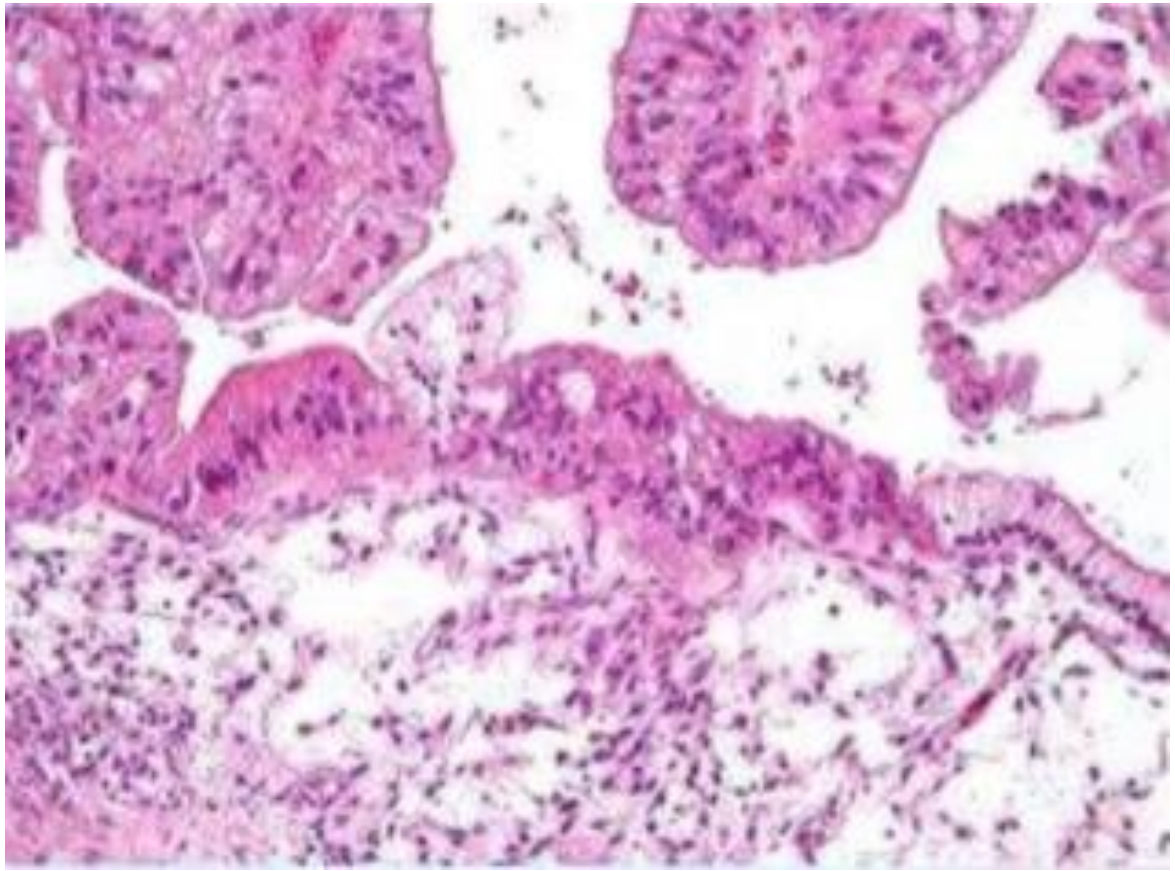
Margination & Migration of Leukocytes (neutrophils) from blood into extravascular tissue

Slide Name:
Serous Acute Inflammation: Microscopic

Features of slide:

Serous inflammation is marked by the exudation of cell poor fluid into spaces created by injury to Surface epithelium or into body cavities lined by the peritoneum, pleura or pericardium.

Example: The skin blister resulting from a burn or viral infection represents accumulation of serous fluid within or immediately beneath the damaged epidermis of the skin.



Slide Name:
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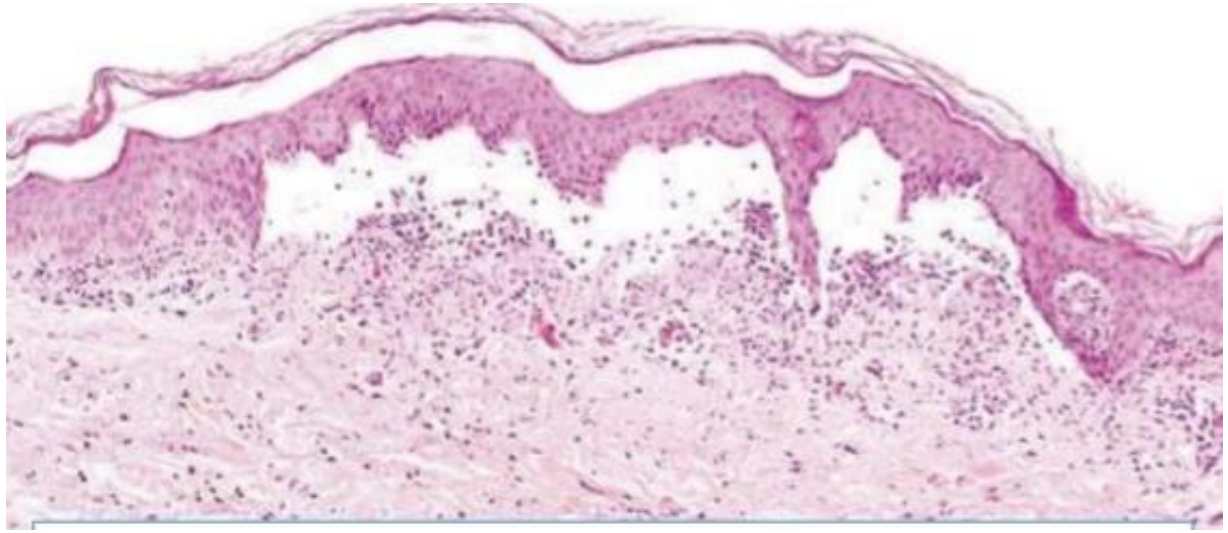
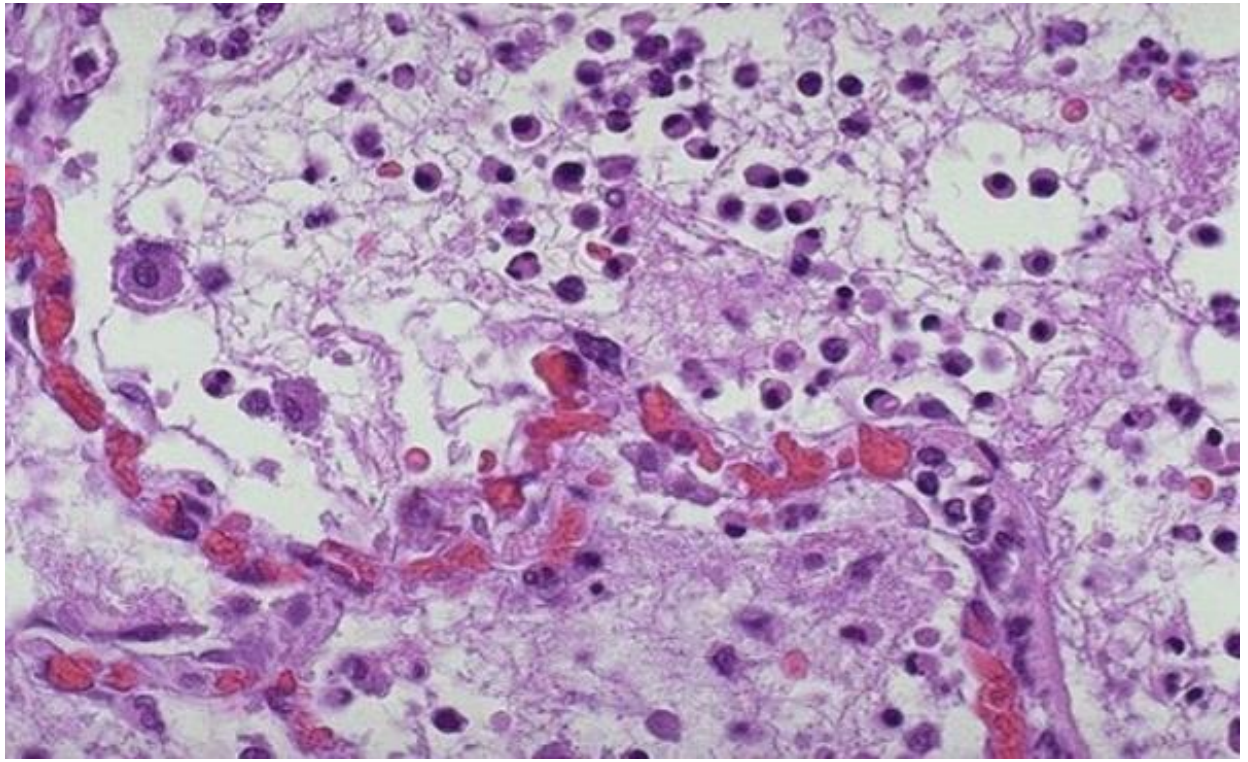


Low power view of a cross section of a skin blister showing the epidermis separated from the dermis by a focal collection of serous effusion.

Slide Name:
Serous Acute Inflammation: Microscopic

Features of slide:

Vasodilation with exudation that has led to an outpouring of fluid into alveolar spaces, along with PMN's.

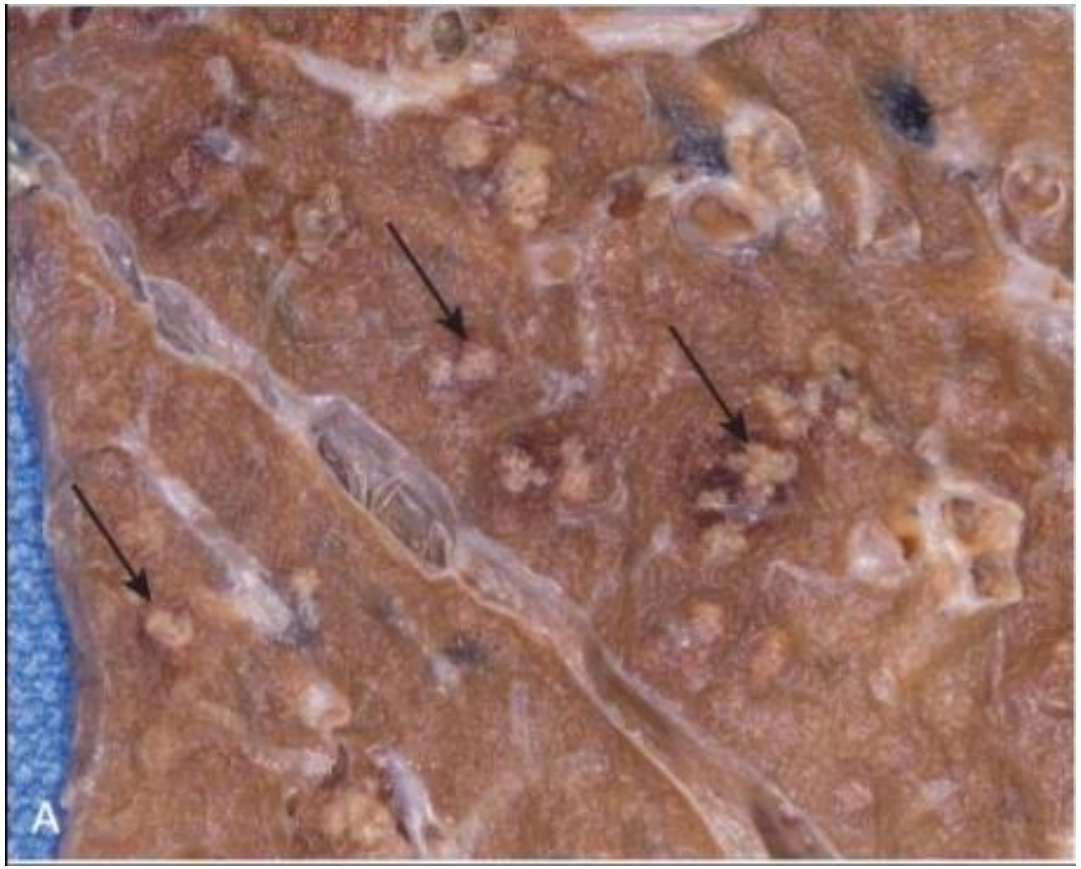


Slide Name:

Purulent (Suppurative) Acute Inflammation: Gross

Features of slide:

Multiple bacterial abscesses in the lung in a case of bronchopneumonia.

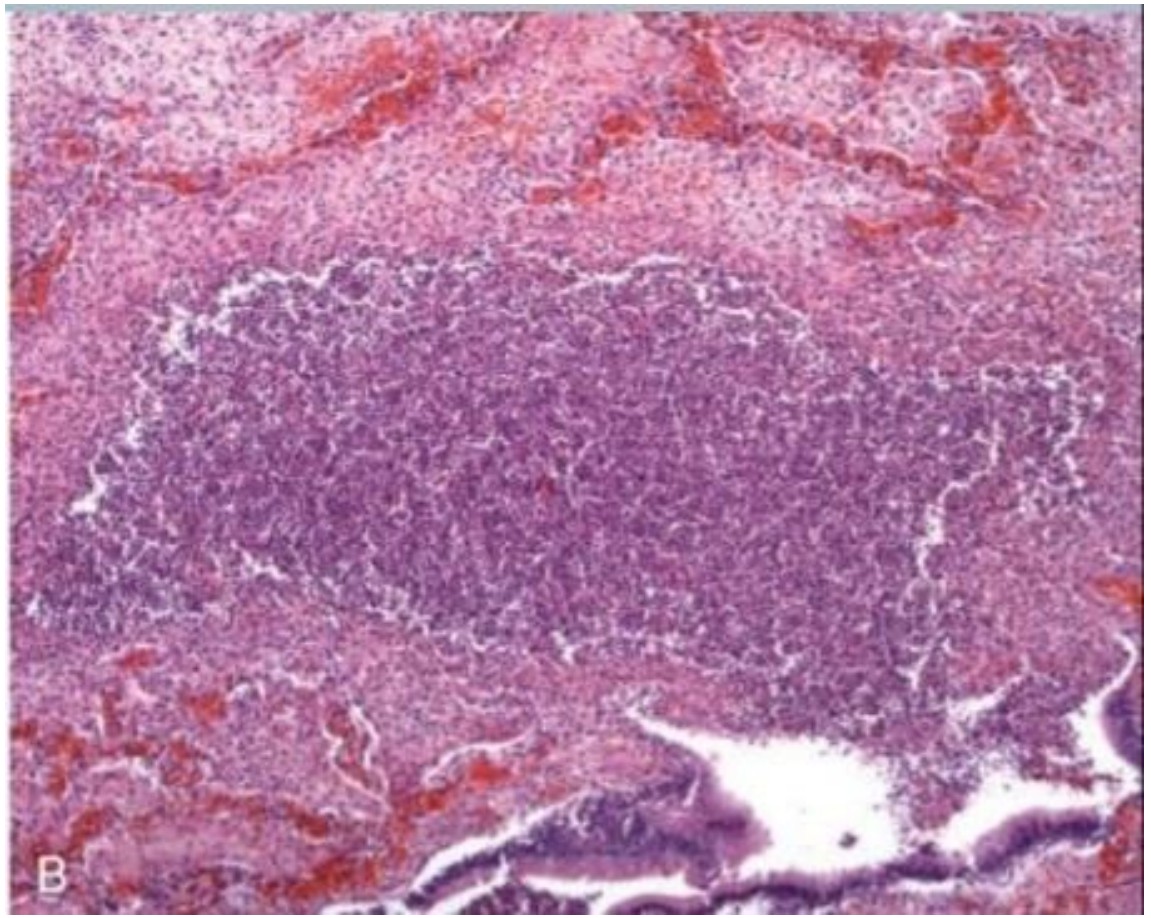


Slide Name:

Purulent (Suppurative) Acute Inflammation: Microscopic

Features of slide:

The abscess contains neutrophils and cellular debris, and is surrounded by congested blood vessels.

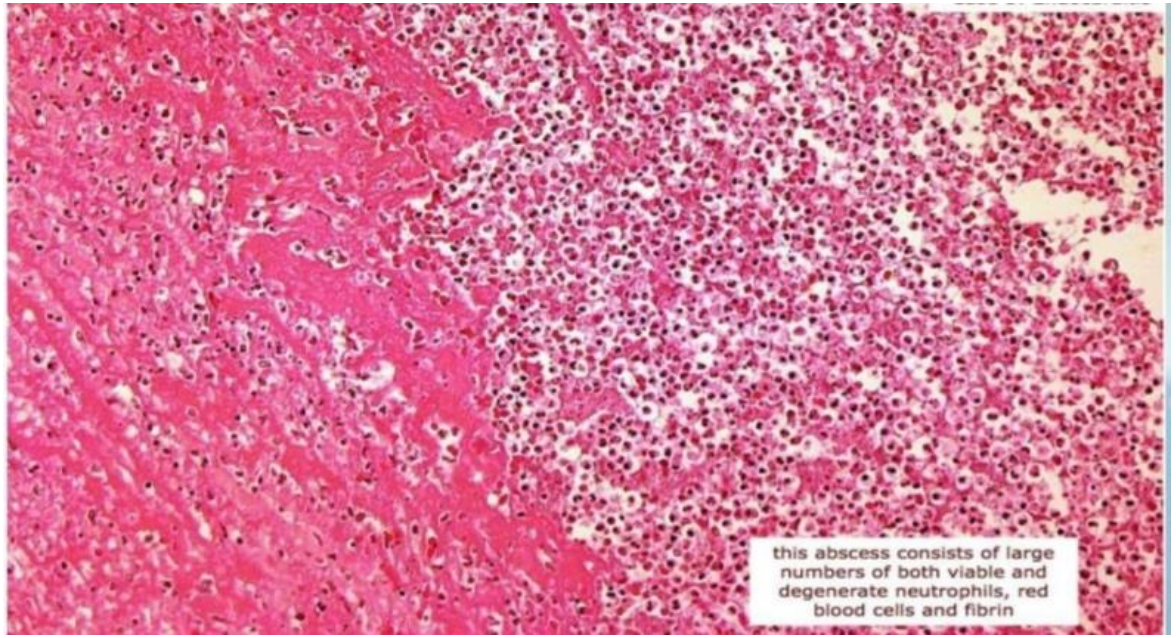


Slide Name:

Purulent (Suppurative) Acute Inflammation: Microscopic

Features of slide:

This abscess consists of large numbers of both viable and degenerate neutrophils, red blood cells and fibrin.

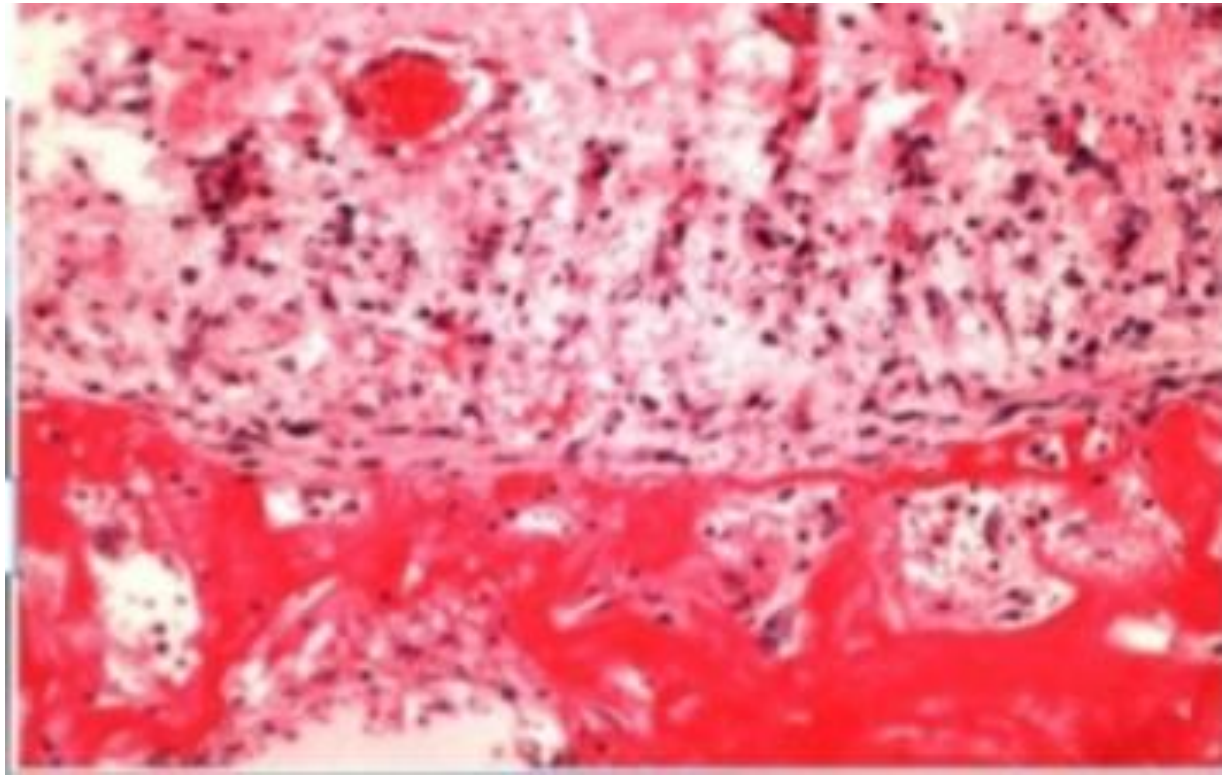


Slide Name:

Fibrinous Acute Inflammation: Microscopic

Features of slide:

1. Histologically, fibrin appears as an eosinophilic meshwork of threads.
2. A fibrinous exudate develops when the vascular leaks are large or there is a local procoagulant stimulus. Higher-molecular weight proteins such as fibrinogen pass out of the blood, and fibrin is formed and deposited in the extracellular space.
3. A fibrinous exudate is characteristic of inflammation in the lining of body cavities, such as the meninges, pericardium, and pleura.
4. Fibrinous exudates may be dissolved by fibrinolysis and cleared by macrophages. If the fibrin is not removed, with time, it may stimulate the ingrowth of fibroblasts and blood vessels and thus lead to scarring.



Features of slide:

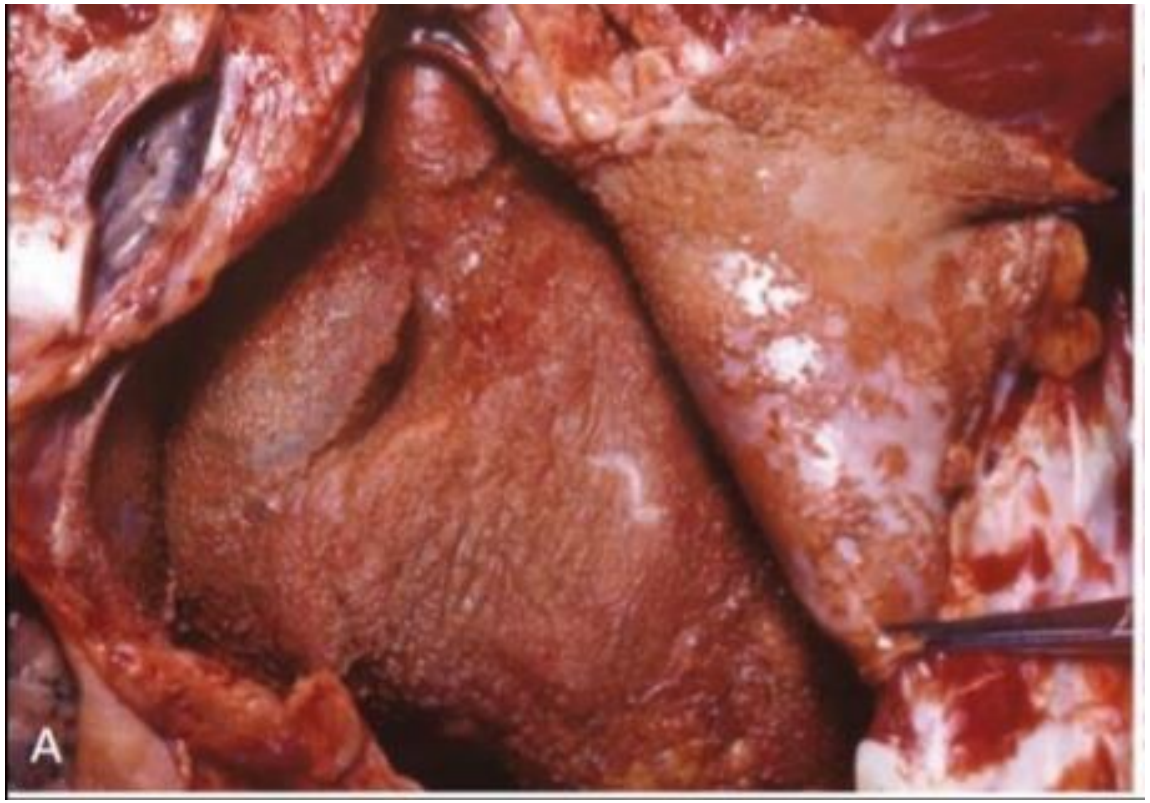
Pink meshwork of fibrin exudate

Slide Name:
Fibrinous Acute Inflammation: Gross

Features of slide:

Fibrinous pericarditis:

Deposits of fibrin on the pericardium.

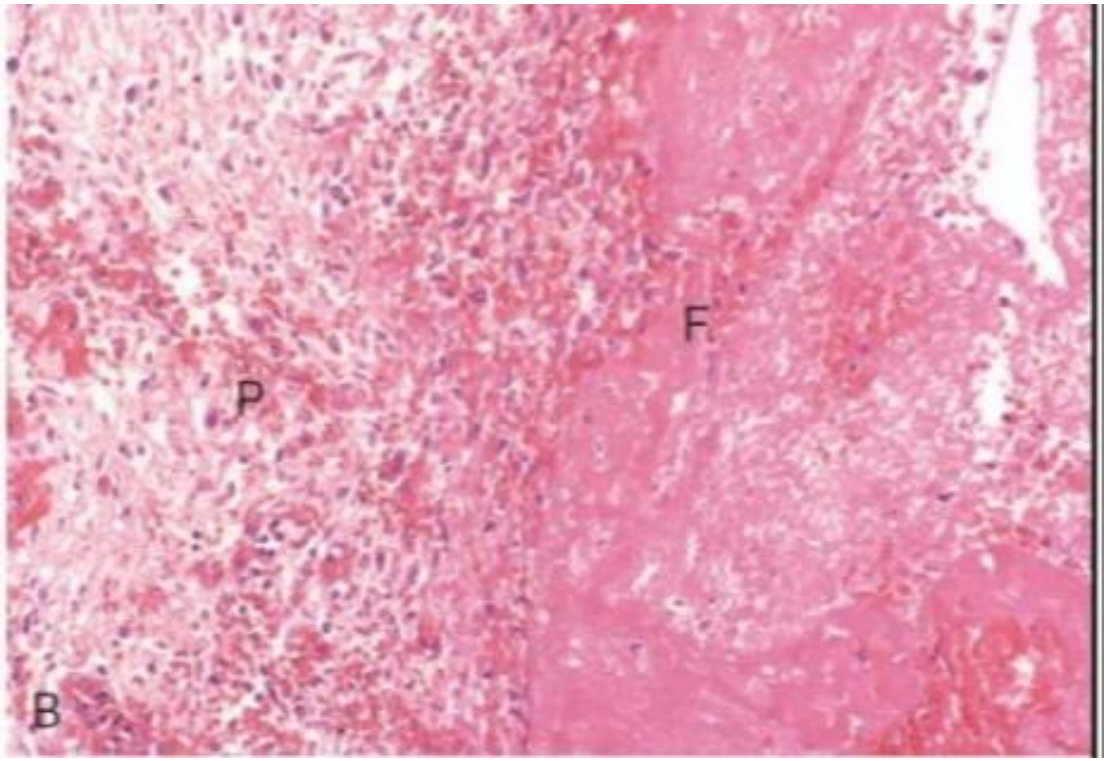


Slide Name:

Fibrinous Acute Inflammation: Microscopic

Features of slide:

Fibrinous pericarditis: A pink meshwork of fibrin exudate overlies the pericardial surface.

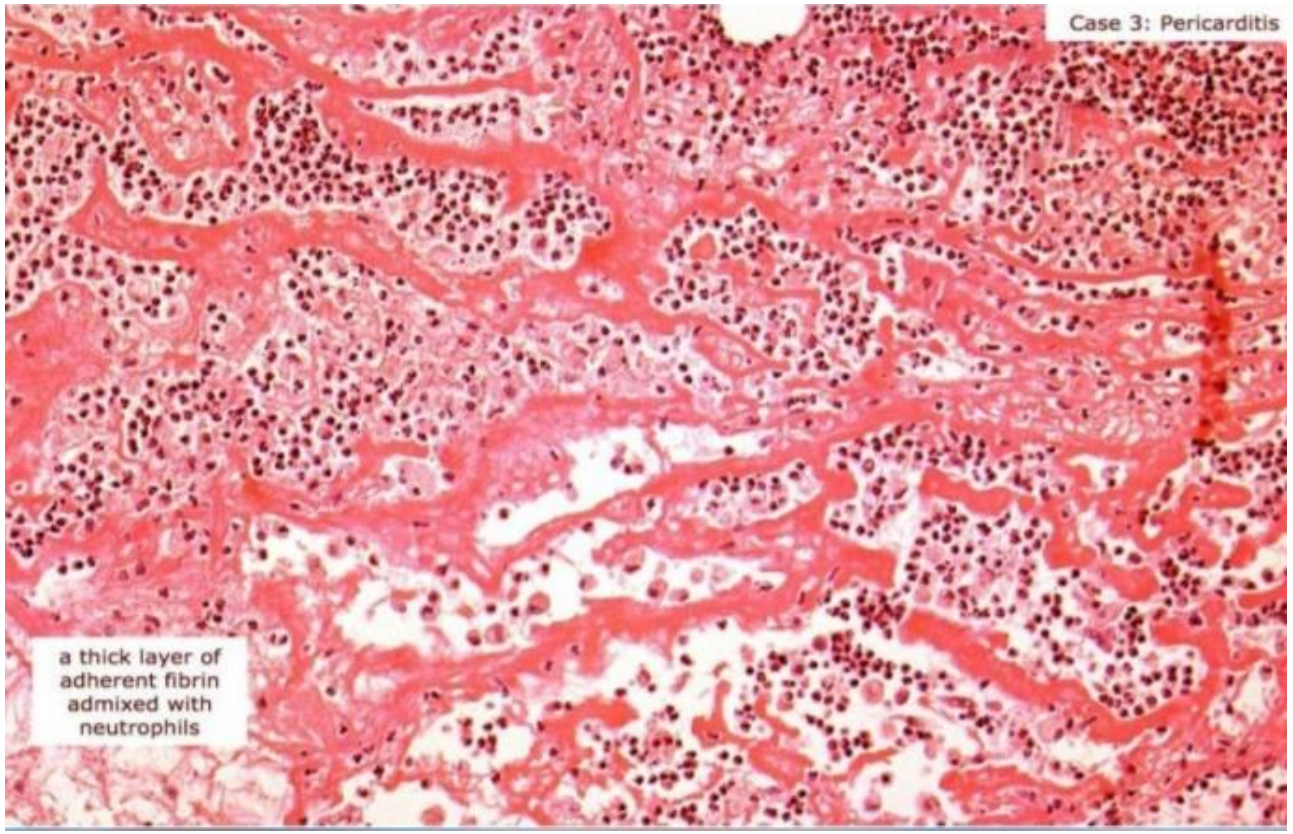


Slide Name:

Fibrino-suppurative Acute Inflammation: Microscopic

Features of slide:

Pericarditis: A thick layer of adherent fibrin admixed with neutrophils



Slide Name:
Ulcers: Gross

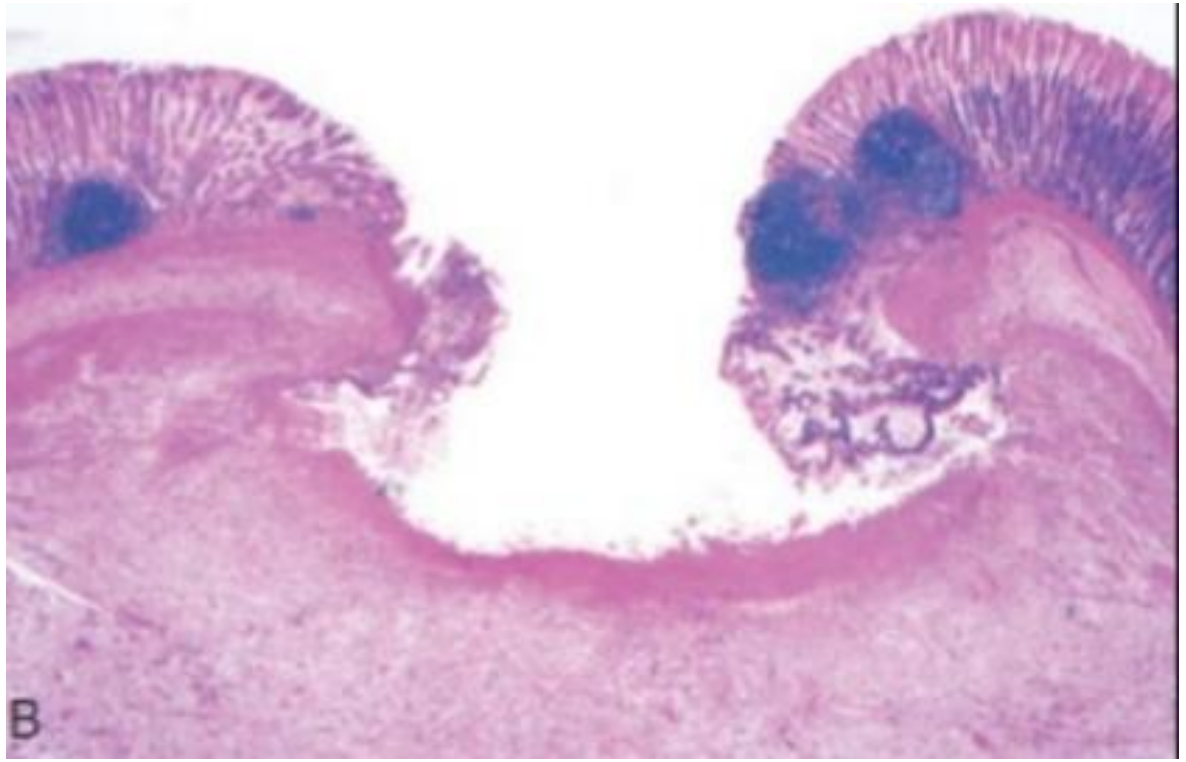
Features of slide:

The morphology of an ulcer. A chronic duodenal ulcer.

Slide Name:
Ulcers: Microscopic

Features of slide:

Low-power cross section view of a duodenal ulcer crater with an acute inflammatory exudate in the base.



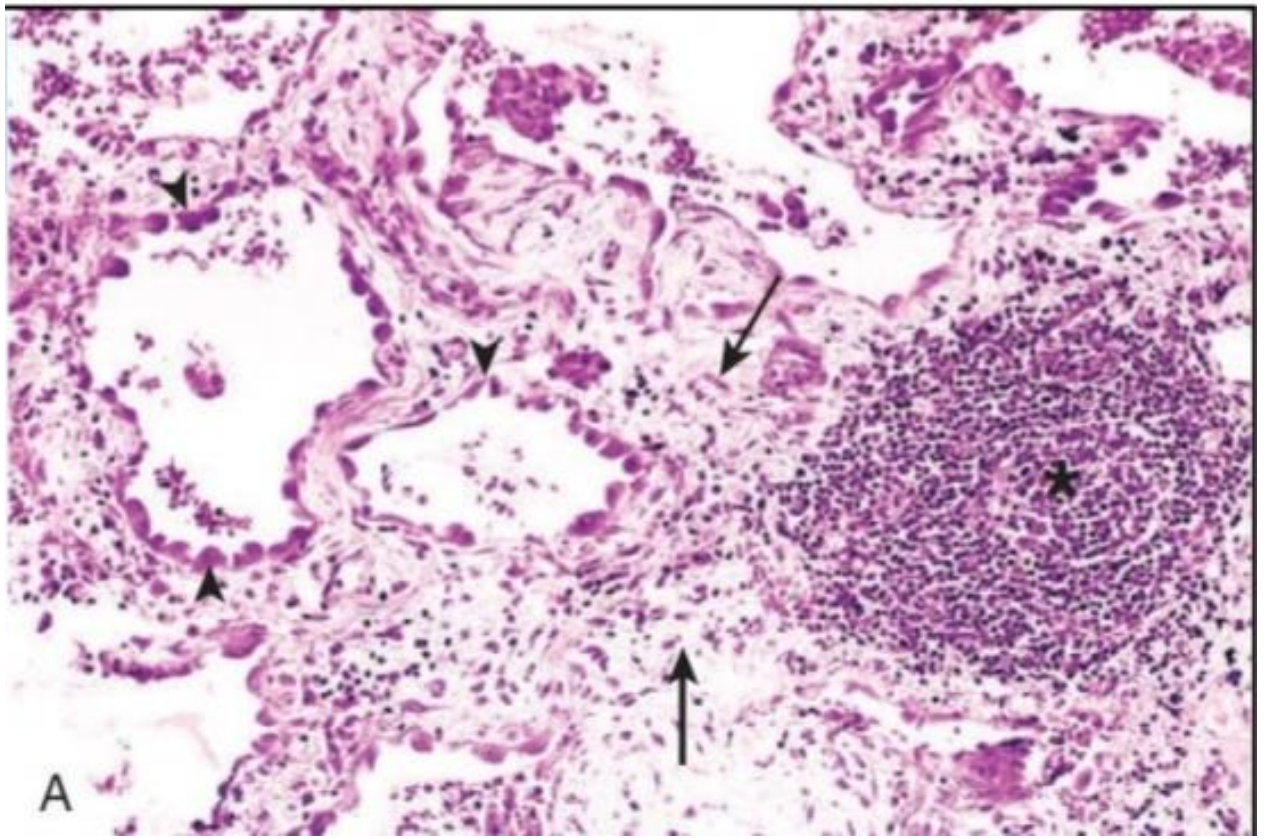
Slide Name:

Chronic non-specific Inflammation: Microscopic

Features of slide:

A) Chronic inflammation in the lung, showing all three characteristic histologic features:

1. Collection of chronic inflammatory cells
2. Destruction of parenchyma (normal alveoli replaced by spaces lined by cuboidal epithelium)
3. Replacement by connective tissue (fibrosis)

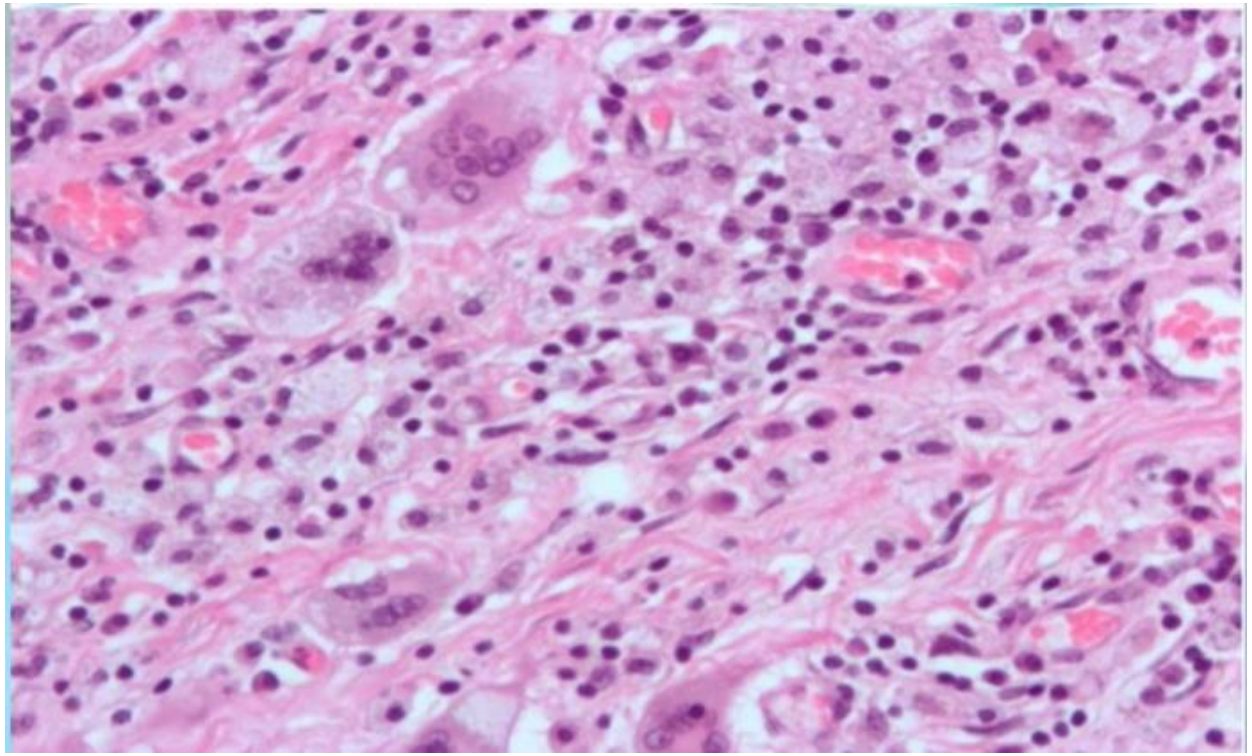


Slide Name:

Chronic non-specific Inflammation: Microscopic

Features of slide:

Inflammation infiltrate of eosinophils (mainly), lymphocytes and macrophage.

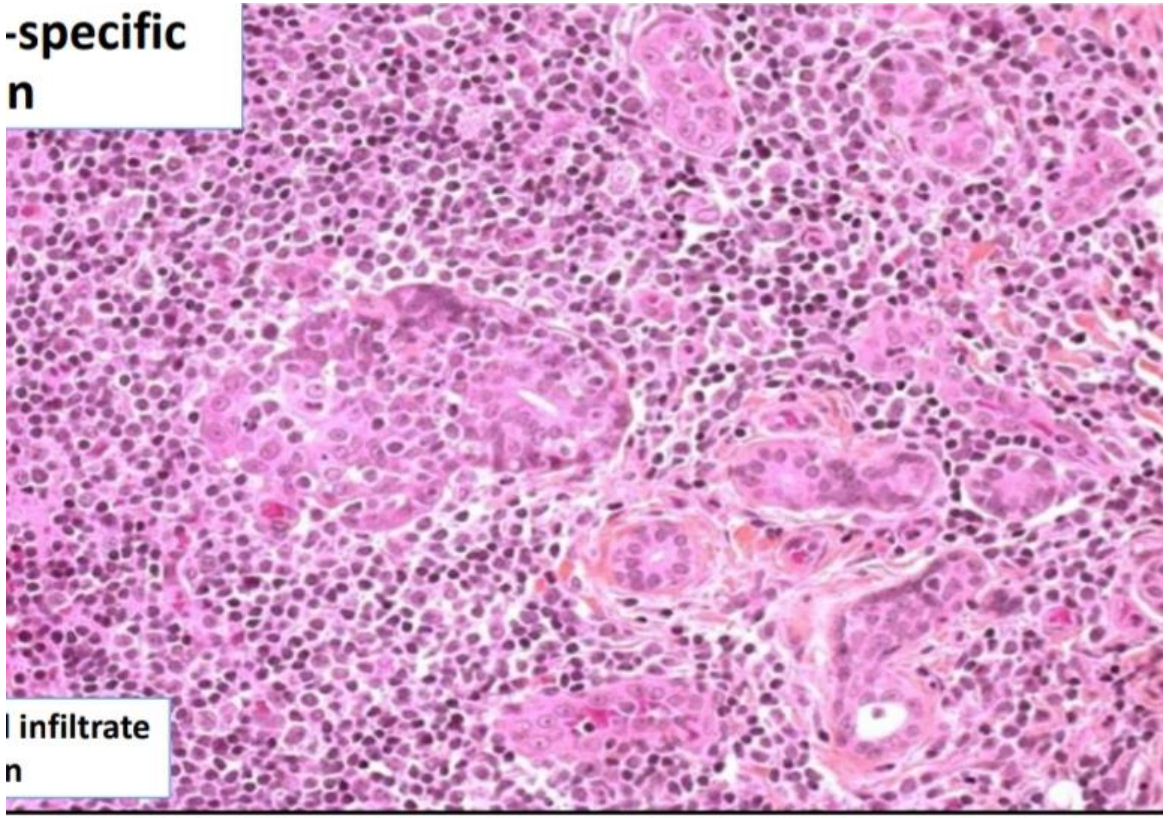


Slide Name:

Chronic non-specific Inflammation: Microscopic

Features of slide:

1. Mononuclear cell infiltrate.
2. Tissue destruction.



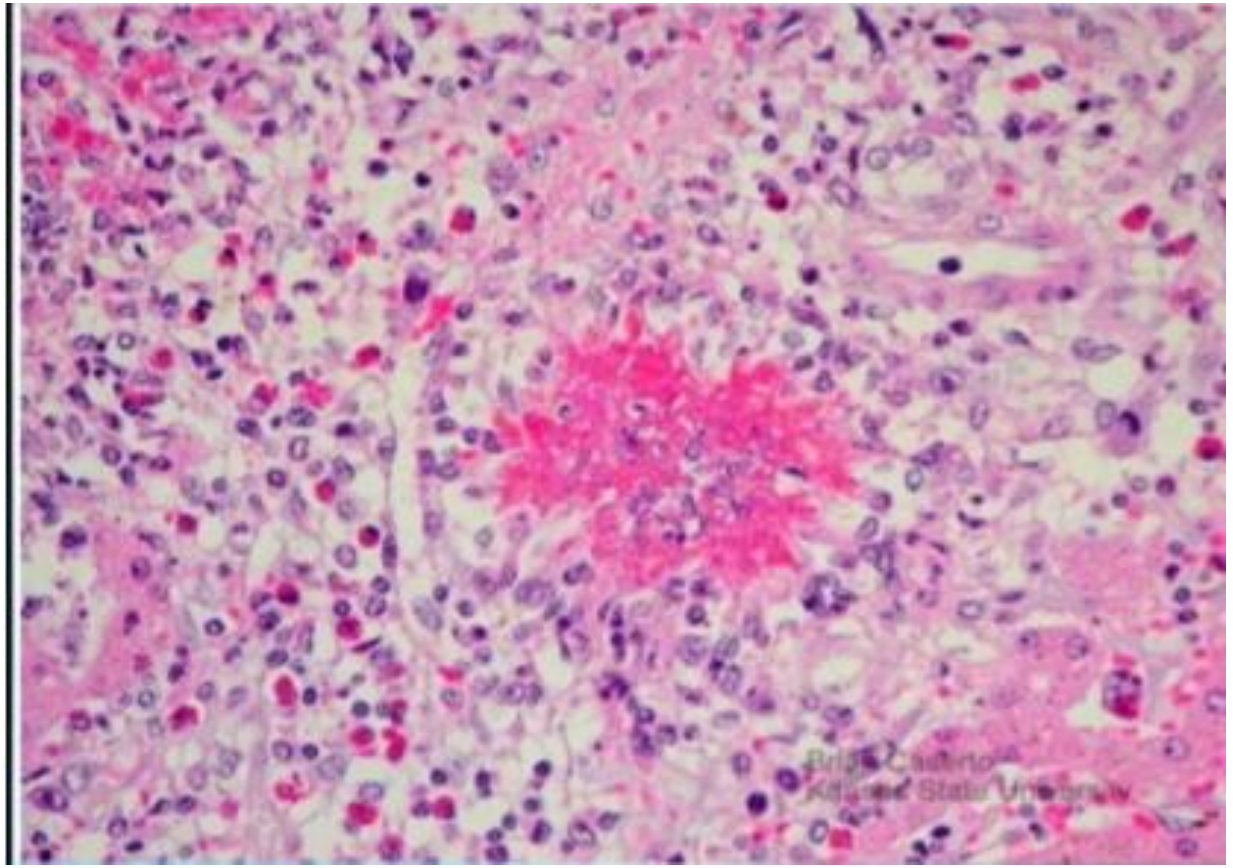
Slide Name:

Chronic specific Inflammation: Microscopic

Features of slide:

A focus of inflammation containing numerous eosinophils

Eosinophils are abundant in immune reactions mediated by IgE and in parasitic and allergic infections.



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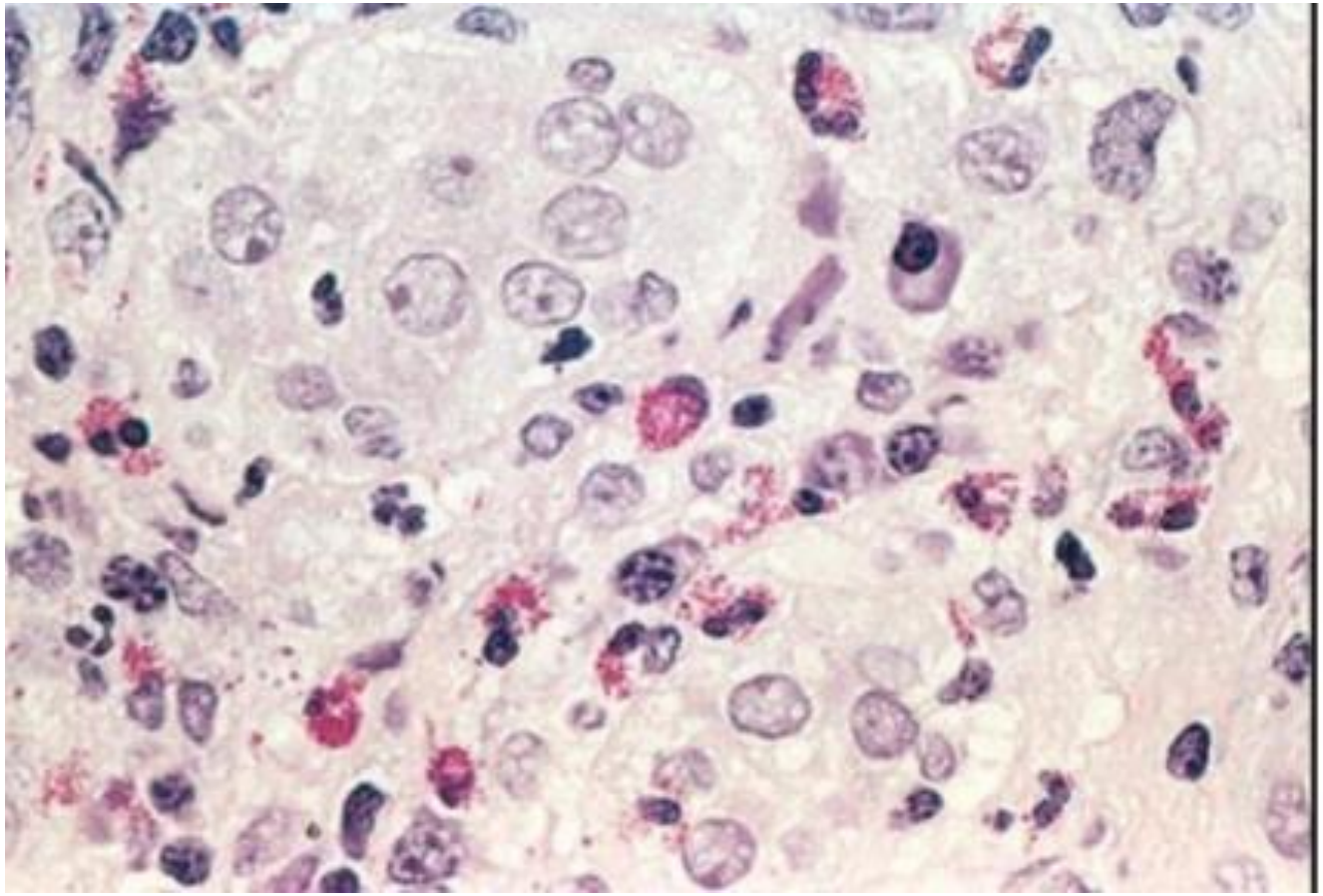
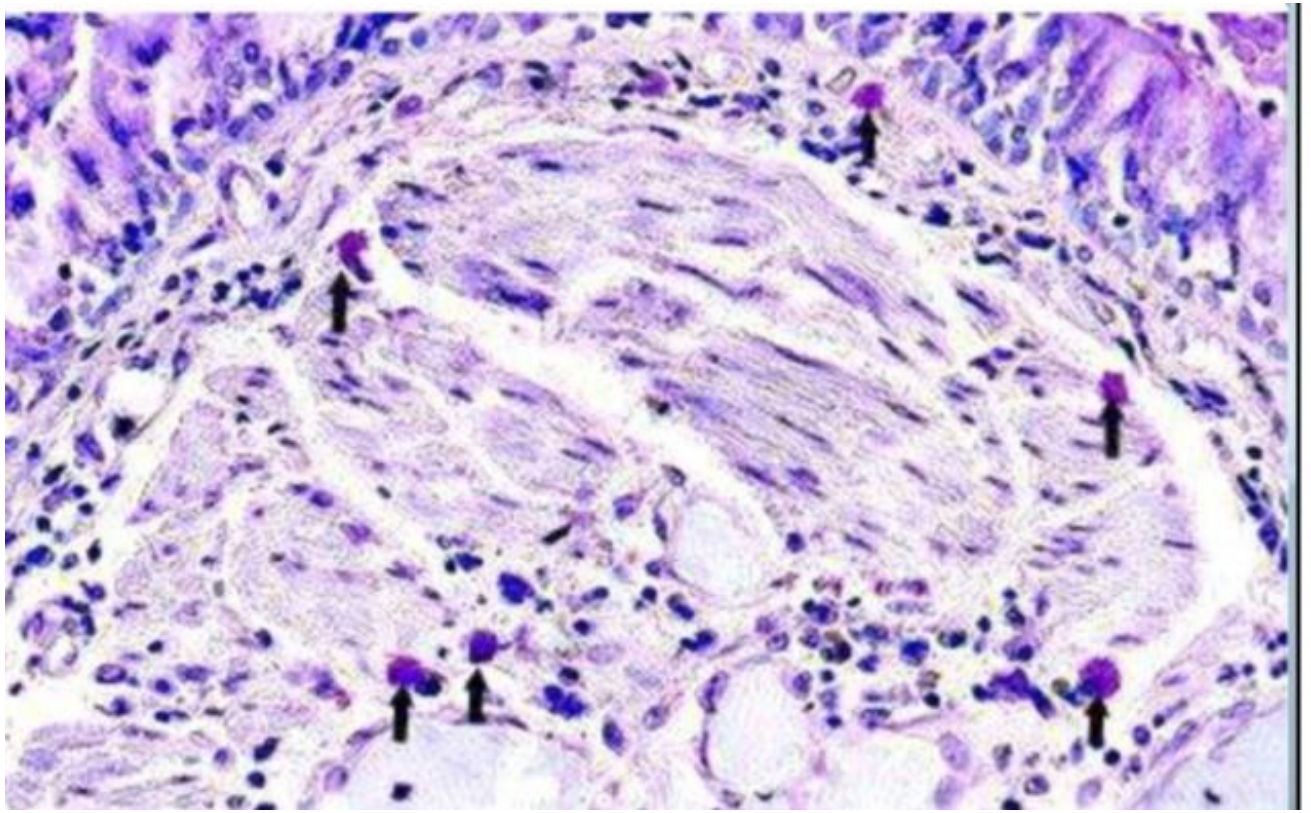


Slide Name:

Chronic specific Inflammation: Microscopic

Features of slide:

-Mast cells\Basophils are widely distributed in connective tissues and participate in both acute and chronic inflammatory reactions.
-They play a role during allergic reactions to foods, insect venom, or drugs, sometimes with catastrophic results (e.g., anaphylactic shock).



Features of slide:
show mast cells & Basophils

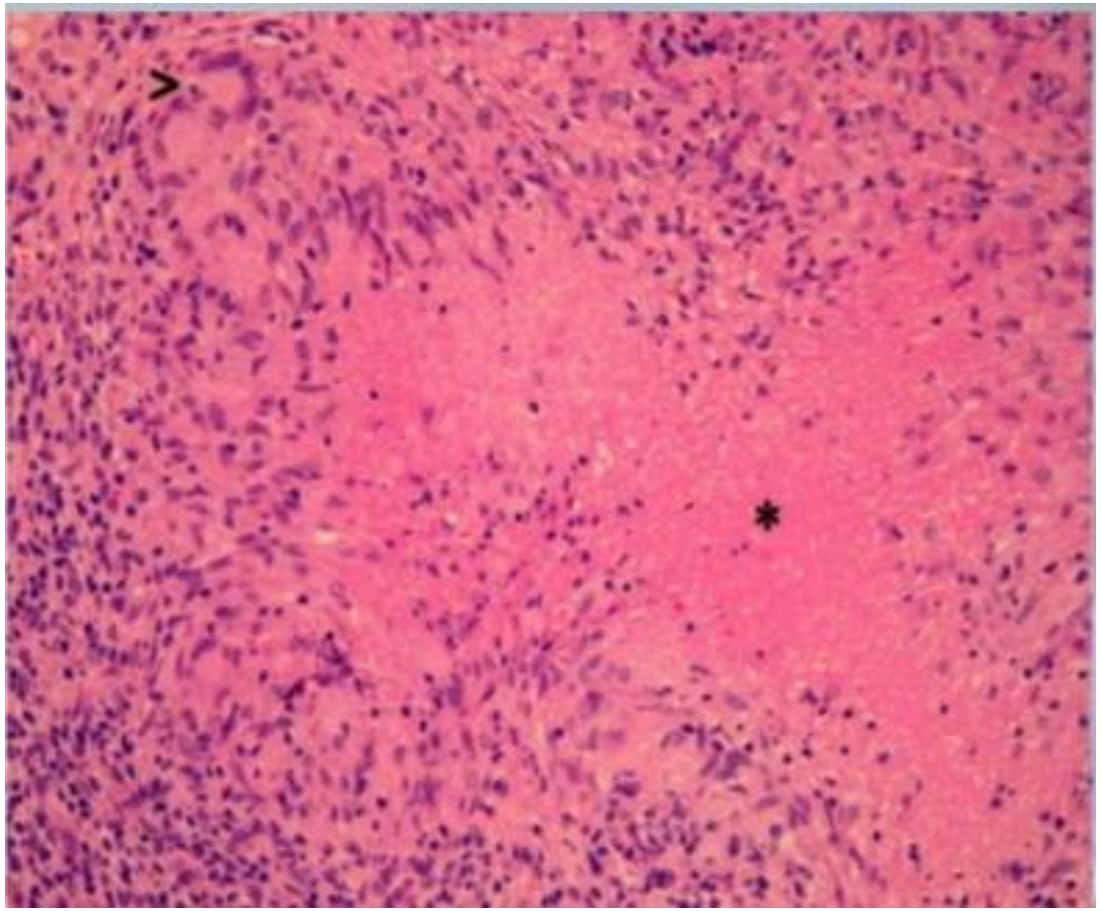
Slide Name:

Chronic specific Inflammation (Caseating Granuloma): Microscopic

Features of slide:

Typical tuberculous granuloma showing an area of

1. Central necrosis
2. Surrounded by multiple multinucleated giant cells
3. Epithelioid cells
4. Lymphocytes.



Slide Name:

Chronic specific Inflammation (Caseating Granuloma): Microscopic

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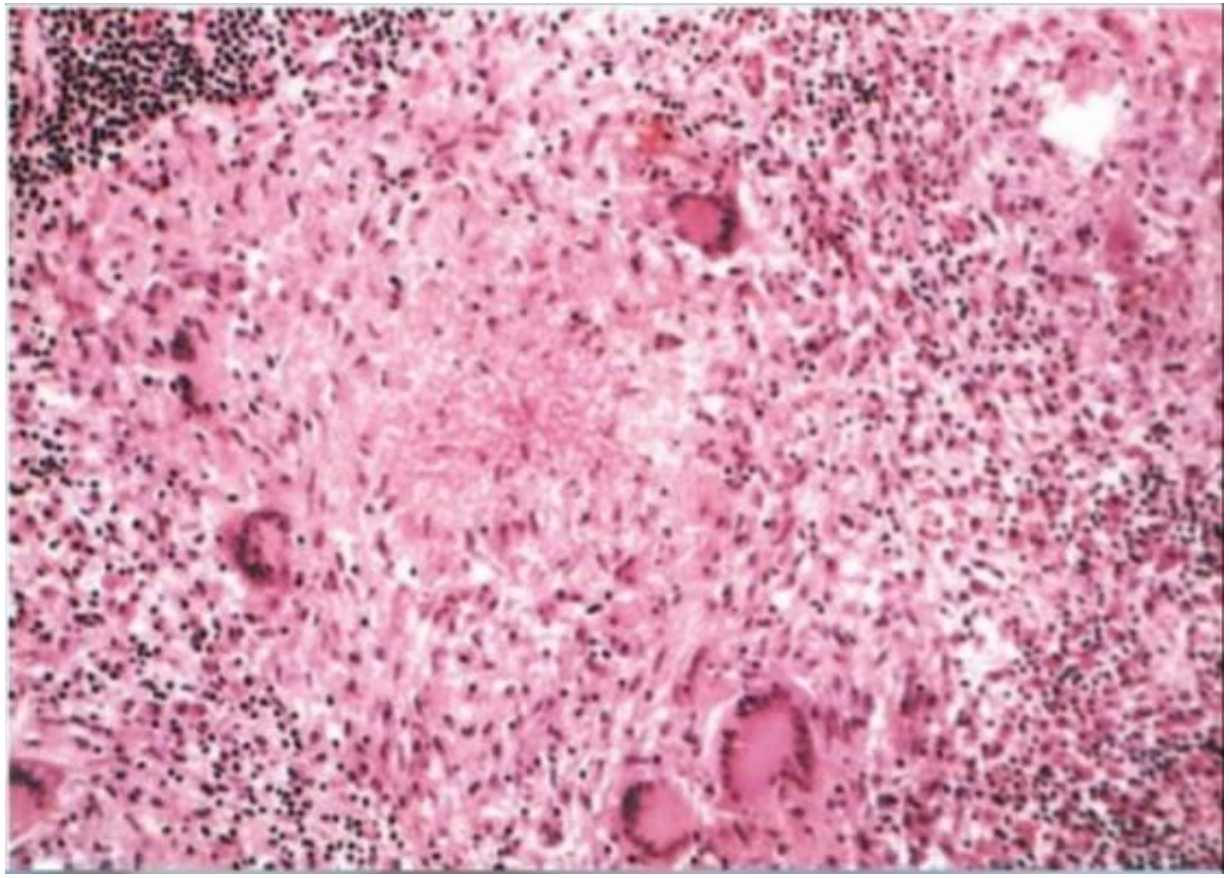
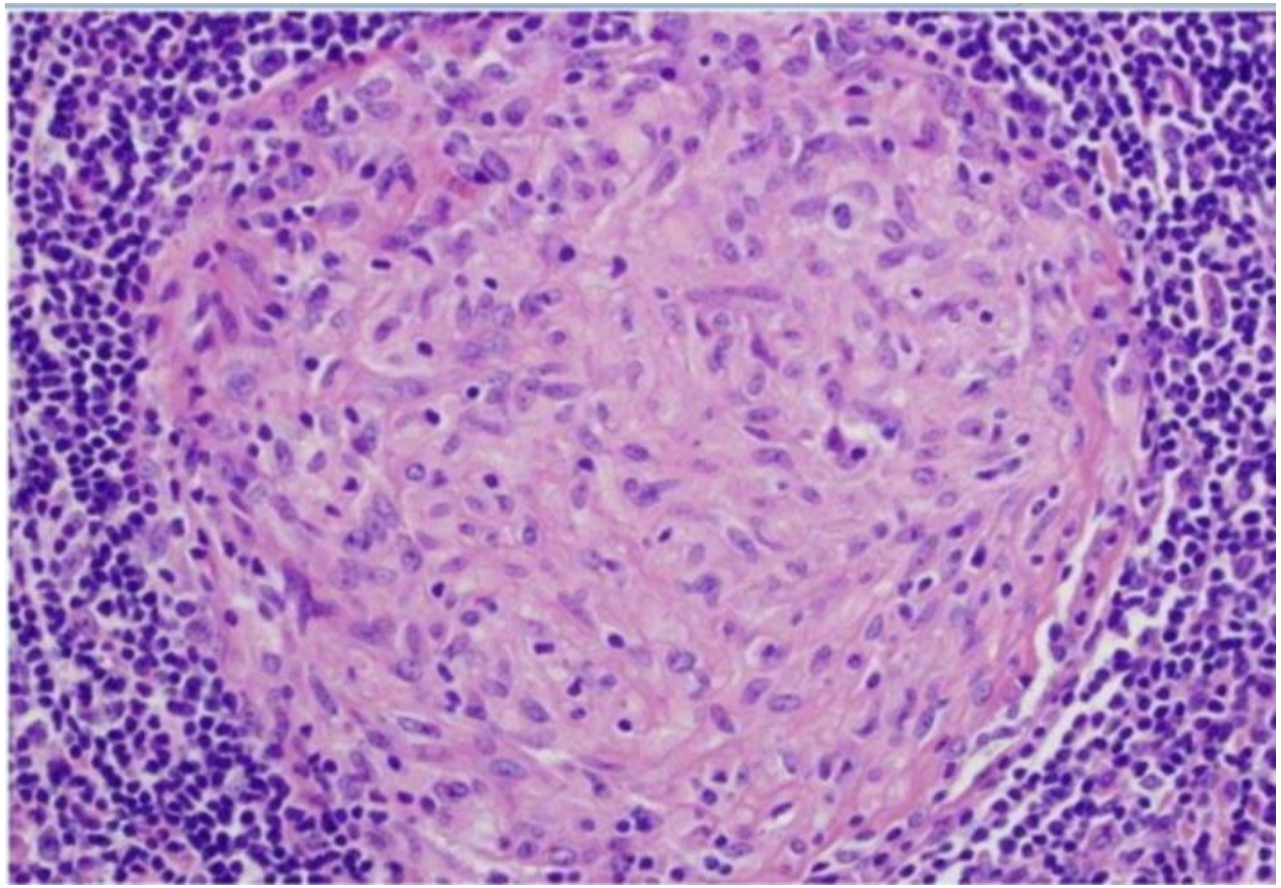


Slide Name:

Chronic specific Inflammation (Non-Caseating Granuloma): Microscopic

Features of slide:

Granuloma with accumulation of multinuclear giant cells, epithelioid cells and lymphocytes.

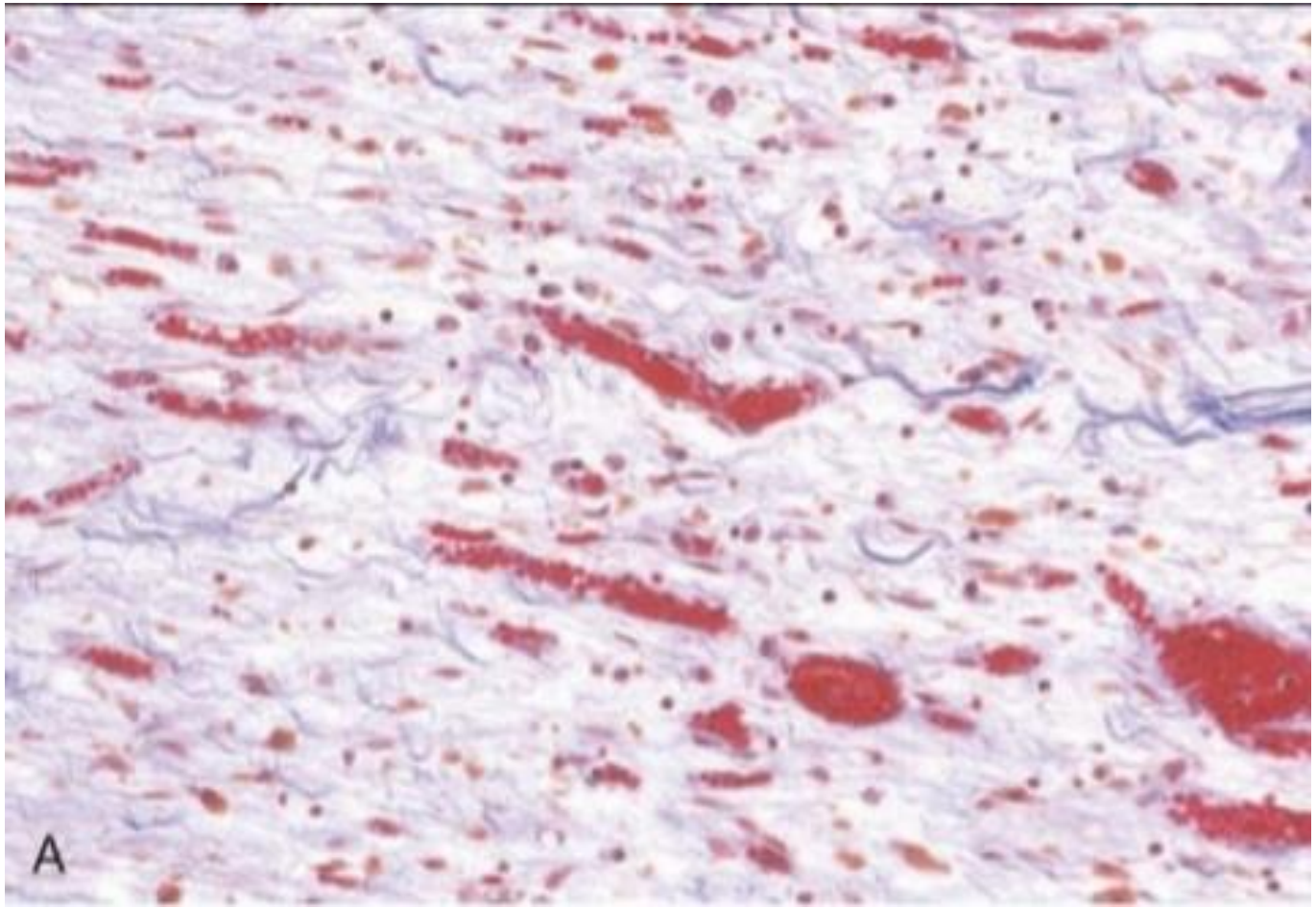


Slide Name:

Chronic Inflammation: Early Tissue Repair: Microscopic

Features of slide:

Granulation tissue showing numerous blood vessels, edema, and a loose extracellular matrix containing occasional inflammatory cells. Collagen is stained blue by the trichrome stain; minimal mature collagen can be seen at this point.

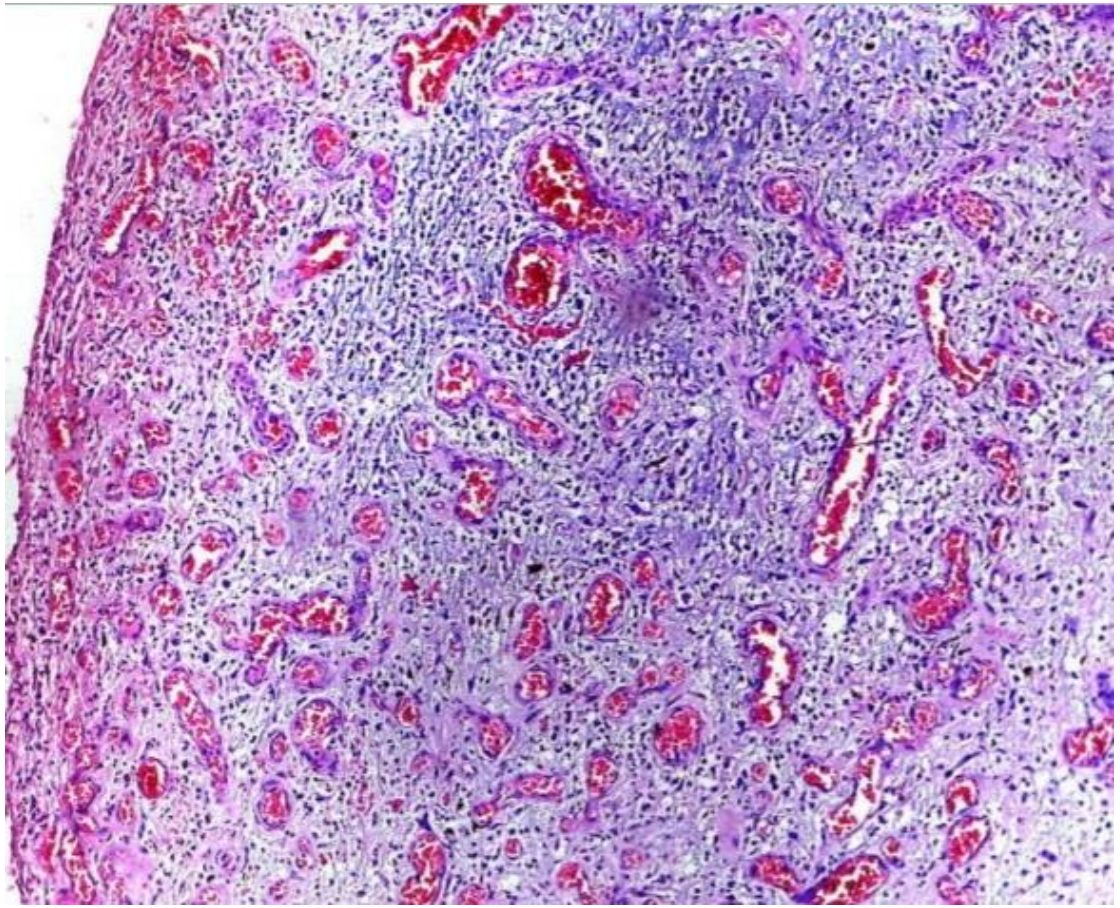


Slide Name:

Chronic non-specific Inflammation Early tissue repair (Granulation tissue formation): Microscopic

Features of slide:

Granulation tissue Showing numerous proliferating capillaries.

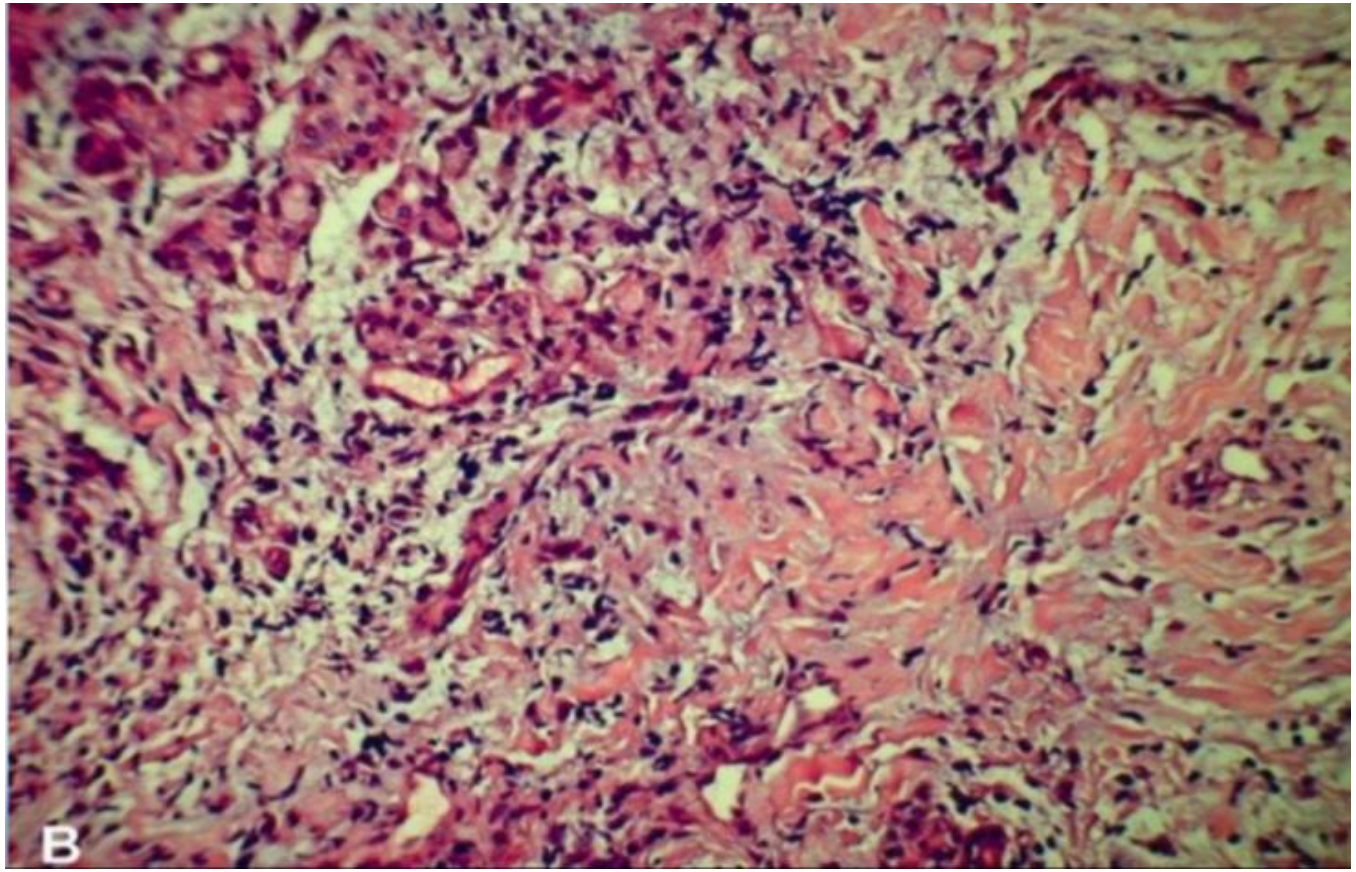


Slide Name:

Chronic non-specific Inflammation Late tissue repair (Fibrosis tissue formation): Microscopic

Features of slide:

Fibrous tissue formation with presence of fibroblasts.



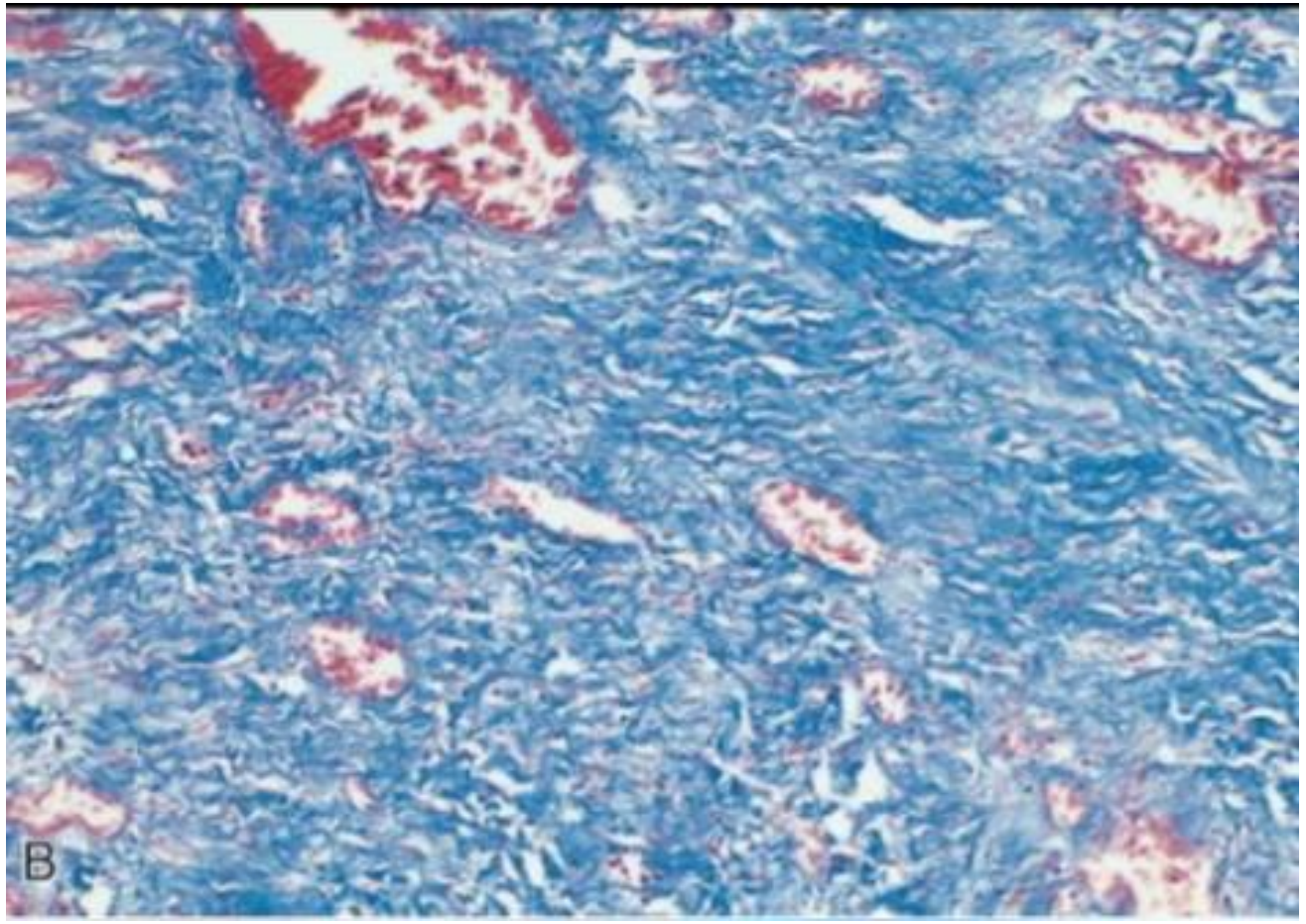
Slide Name:

Chronic Inflammation: Late Tissue Repair: Microscopic

Features of slide:

A Mature scar or fibrosis:

Trichrome stain of mature scar, showing dense collagen (stained blue) and scattered vascular channels.



Repair

Slide Name:

Skin ulcer; with necrotic tissue: Gross

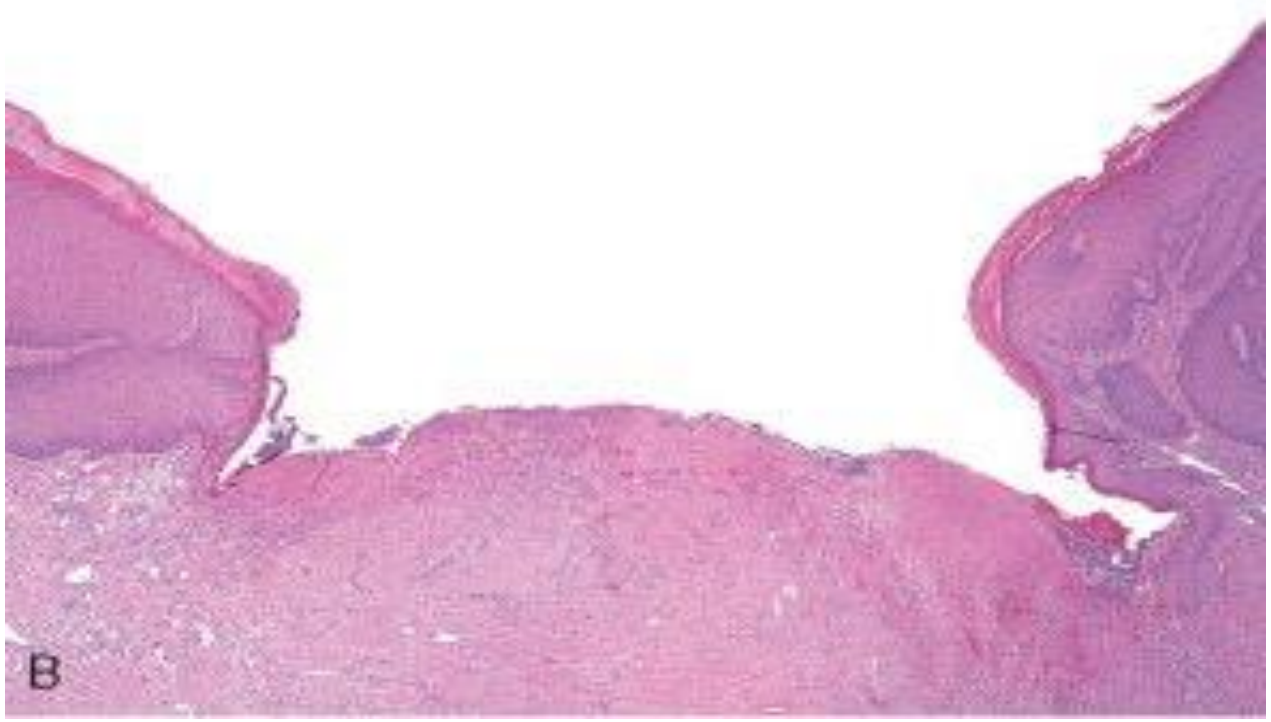
Features of slide:

Segmental loss of the epidermis, including the basement membrane, with exposure of the underlying dermis. The margins and base of the ulcer develop fibroblast proliferation, scarring and the accumulation of lymphocytes, macrophages and plasma cells.

Slide Name:
Skin ulcer; with necrotic tissue: Microscopic

Features of slide:

Segmental loss of the epidermis, including the basement membrane, with exposure of the underlying dermis. The margins and base of the ulcer develop fibroblast proliferation, scarring and the accumulation of lymphocytes, macrophages and plasma cells.

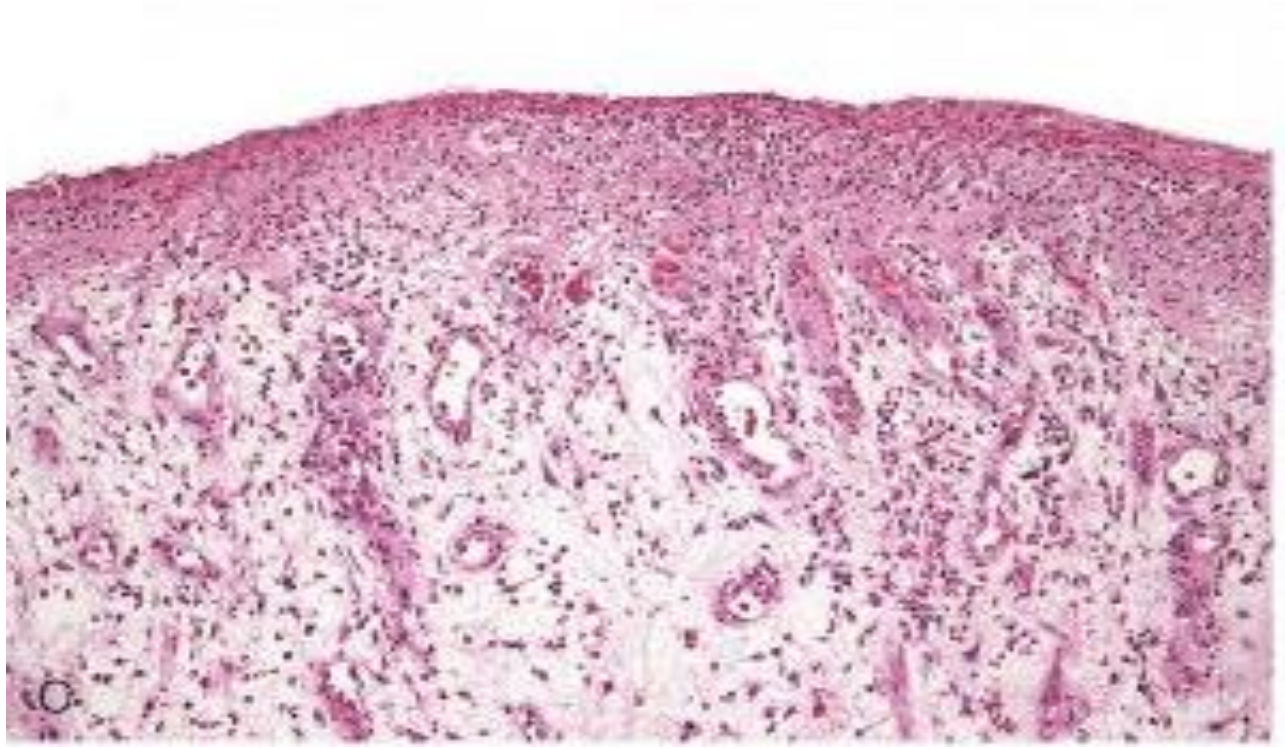


Slide Name:

Granulation tissue: Microscopic

Features of slide:

Granulation tissue.

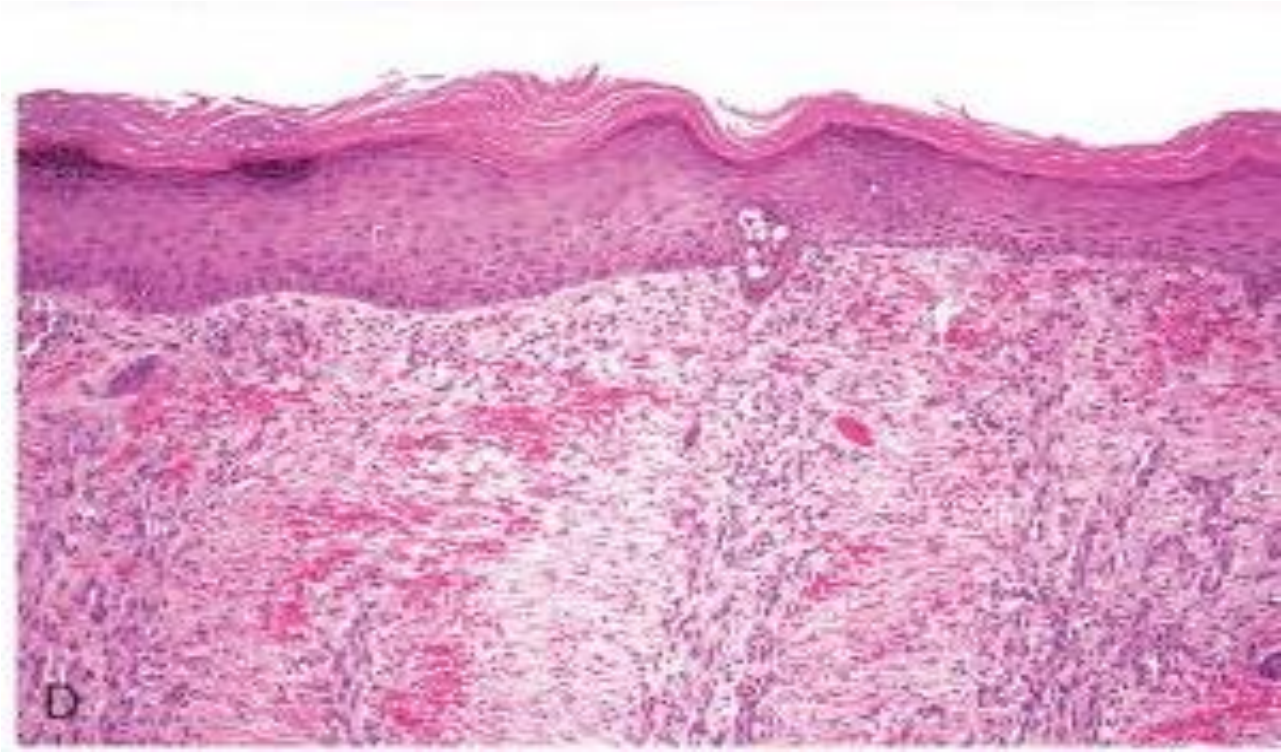


Slide Name:

Fibrosis: Microscopic

Features of slide:

Fibrosis



Slide Name:

Scar formation: Gross wound healing

Features of slide:

Lining of fibrous tissue

(due to collagen deposition)

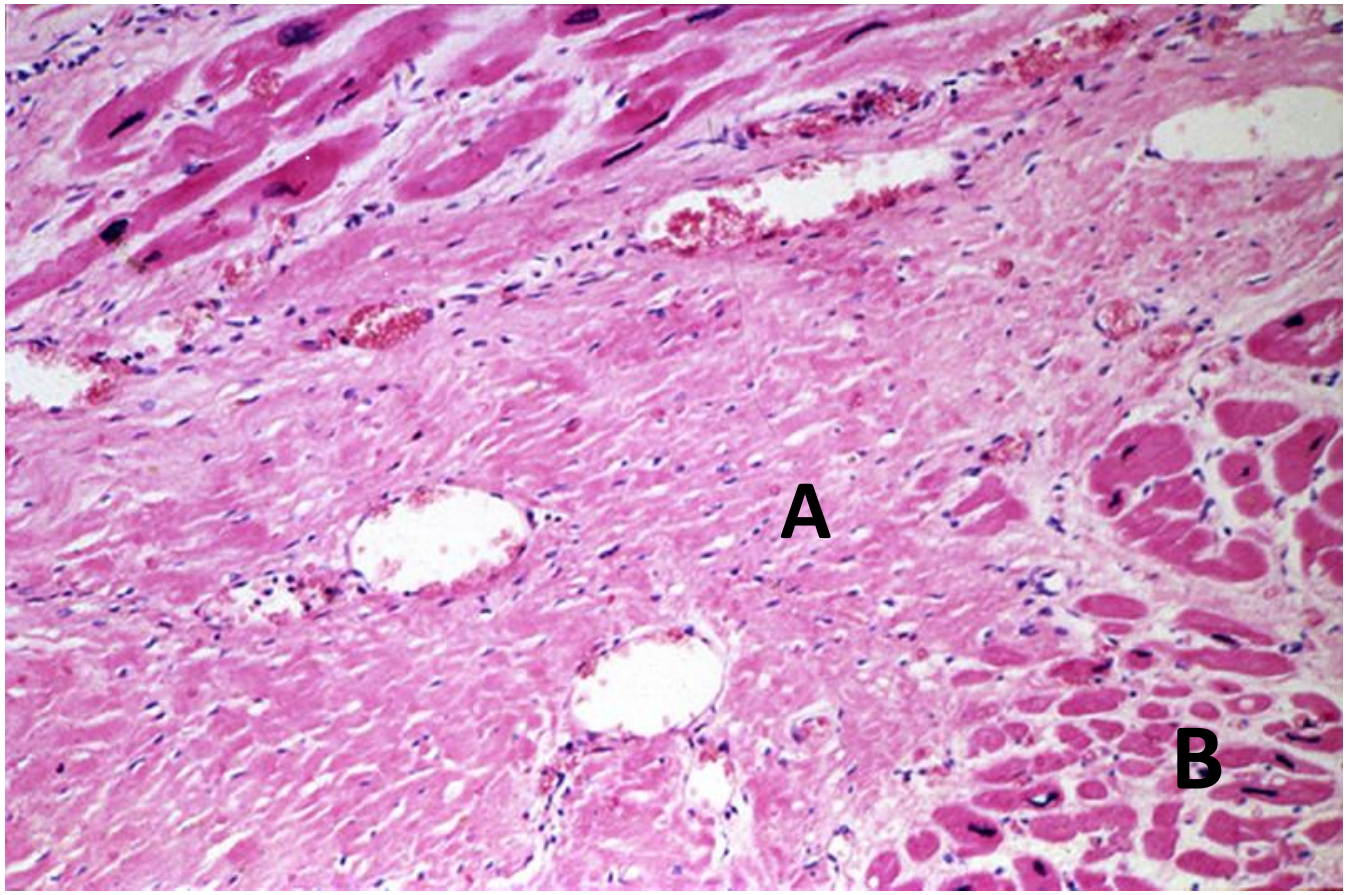
Slide Name:

Scar formation after MI: Microscopic

Features of slide:

A: Fibrous tissue

B: Cardiac muscle cell



Slide Name:

Scar formation after MI: Gross

Features of slide:

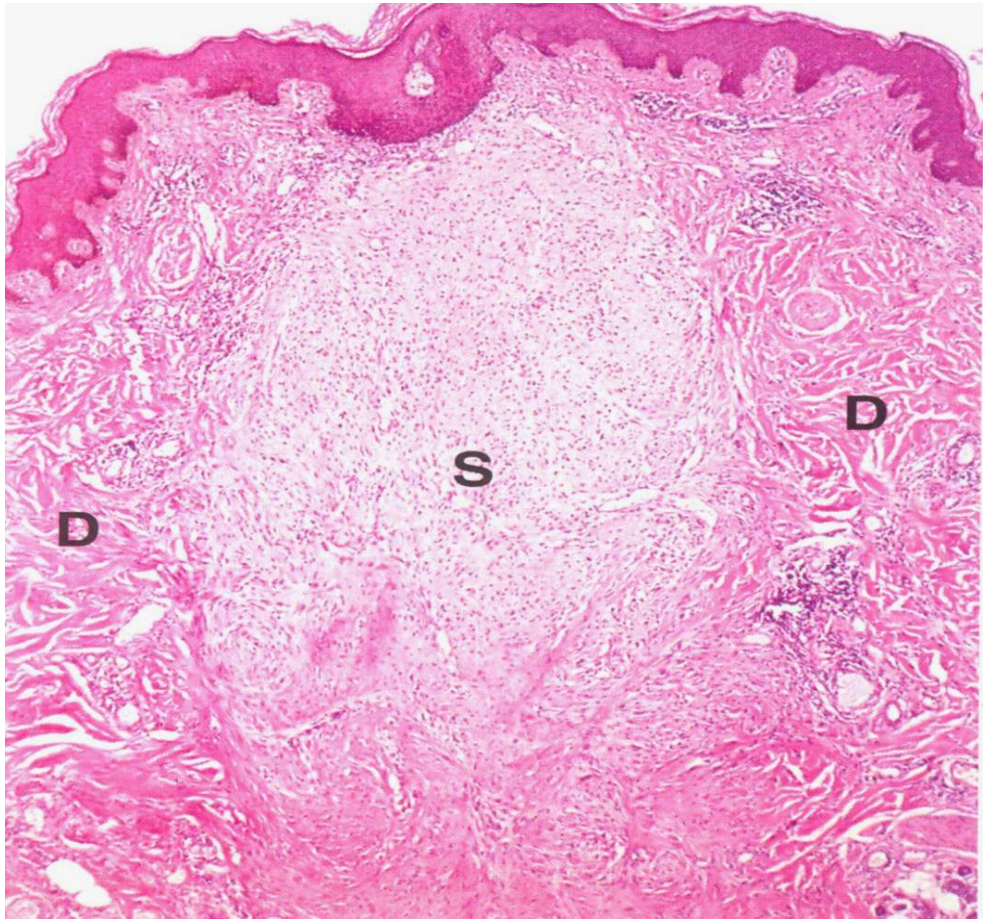
1. Fibrous tissue
2. Cardiac muscle cell

Slide Name:

Keloid Scar: Microscopic

Features of slide:

Excessive collagen bundle (pale in color)



Slide Name:

Keloid Scar: Gross

Features of slide:

Large hypertrophic scar extending beyond the edge of the wound.

Slide Name:

Contracture: Gross

Features of slide:

Excessive Fibrous tissue formation >> loss of skin elasticity >> shortening >> deformity.

Slide Name:

Liver Cirrhosis: Gross

Features of slide:

Presence of nodules

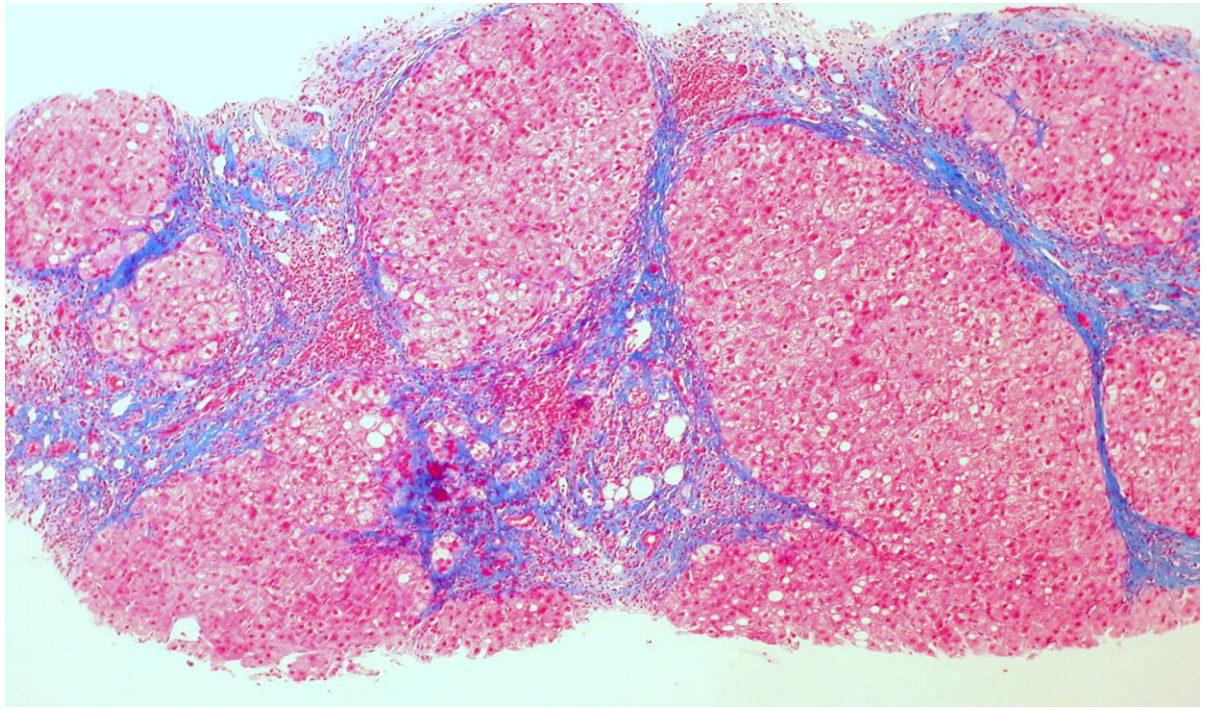
(Micro or Macro)

Slide Name:

Liver Cirrhosis: Microscopic

Features of slide:

Presence of fibrosis + regenerative nodule (loss of the normal architecture)



The end